



National Environmental Achievement Track

Application Form

Ciba Specialty Chemicals, Newport Site

Name of facility

Ciba Specialty Chemicals

Name of parent company (if any)

205 South James St.

Street address

Street address (continued)

Newport, DE 19804

City/State/Zip code

Give us information about your contact person for the
National Environmental Achievement Track Program.

Name Matthew D. Watson

Title Director, Environment, Health & Safety

Phone 302 992 5726

Fax 302 992 9371

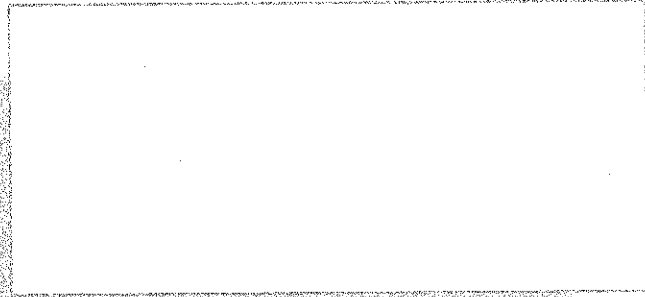
E-mail matthew.watson@cibasc.com

Why do we need this information?

EPA needs background information on your facility to evaluate your application.

What do you need to do?

- Provide background information on your facility.
- Identify your environmental requirements.



1 What do you do or make at your facility?

Ciba Newport manufactures high quality organic pigments for the paints, plastics and inks industries. We manufacture two types of pigments; Quinacridone (QA) and Diketo Pyrolo Pyrol (DPP).

2 List the Standard Industrial Classification (SIC) code(s) or North American Industrial Classification System (NAICS) codes that you use to classify business at your facility.

SIC
2865

NAICS

3 Does your company meet the Small Business Administration definition of a small business for your sector?

☐ Yes ☒ No

4 How many employees (full-time equivalents) currently work at your facility?

- ☐ Fewer than 50
☐ 50-99
☒ 100-499
☐ 500-1,000
☐ More than 1,000

5 Does your facility have an EPA ID number(s)?

☒ Yes

☐ No

If yes, list in the right-hand column.

DED980830400

6 Identify the environmental requirements that apply to your facility. Use the Environmental Requirements Checklist, at the back of the instructions, as a reference. List your requirements to the right *or* enclose a completed Checklist with your application.

Refer to attached checklist.

7 Check the appropriate box in the right-hand column.

☐ I've listed the requirements above.

☒ I've enclosed the Checklist with my application.

8 Optional: Is there anything else you would like to tell us about your facility?

The Newport Site is ISO 14001 registered for its environmental management program.

Why do we need this information?

Facilities must have an operating Environmental Management System (EMS) that meets certain requirements.

What do you need to do?

- Confirm that your EMS meets the Achievement Track requirements.
- Tell us if you have completed a self-assessment or have had a third-party assessment of your EMS.

1 Check **yes** if your EMS meets the requirements for each element below as defined in the instructions.

- a.* Environmental policy ☒ Yes
- b.* Planning ☒ Yes
- c.* Implementation and operation ☒ Yes
- d.* Checking and corrective action ☒ Yes
- e.* Management review ☒ Yes

2 Have you completed at least one EMS cycle (plan-do-check-act)? ☒ Yes

3 Did this cycle include both an EMS and a compliance audit? ☒ Yes

4 Have you completed an objective self-assessment or third-party assessment of your EMS? ☒ Yes

If yes, what method of EMS assessment did you use?

☐ Self-assessment

☐ GEMI

☐ Other

☐ CEMP

☒ Third-party assessment

☒ ISO 14001 Certification

☐ Other

Why do we need this information?

Facilities must show that they are committed to improving their environmental performance. This means that you can describe past achievements and will make future commitments.

What do you need to do?

Refer to the Environmental Performance Table in the instructions to answer questions 1 and 2.

- 1 Describe your past achievements for at least two environmental aspects. If you need more space than is provided, attach copies of this page.

Note to small facilities: If you qualify as a small facility as defined in the instructions, you are required to report past achievement for at least one environmental aspect.

First aspect you've selected

What aspect have you selected?	What was the previous level (2 years ago)?		What is the current level?	
	Quantity	Units	Quantity	Units
Reduction of methanol to sewer system	5000	lbs/day	500	lbs/day
<p>i. How is the current level an improvement over the previous level?</p> <p>Emissions of methanol have been reduced by an order-of-magnitude due to replacement of the existing QA synthesis process with a new, state-of-the-art manufacturing facility.</p> <p>ii. How did you achieve this improvement?</p> <p>Re-design of the existing process and construction of a new plant.</p>				

Second aspect you've selected

What aspect have you selected?	What was the previous level (2 years ago)?		What is the current level?	
	Quantity	Units	Quantity	Units
By 2001, decrease raw materials utilization per pound of QA by 50%, using 1993 as the baseline.	18	lbs/lb product	10	lbs/lb product
<p>i. How is the current level an improvement over the previous level?</p> <p>Reduction YTD of ca. 55% raw materials.</p>				
<p>ii. How did you achieve this improvement?</p> <p>Through process review and material substitution. Recycling of solvents was also a large contributor. QA Mixed alcohols were previously incinerated as hazardous wastes. It was determined that these solvents could be beneficially reclaimed and brought back to the process. Now, 6.5 million pounds of solvents are recycled in the process.</p>				

- 2 Select at least four environmental aspects (no more than two from any one category) from the Environmental Performance Table in the instructions and then tell us about your future commitments. If you need more space than is provided, attach copies of this section.

Note to small facilities: If you are a small facility, you are required to make commitments for at least two environmental aspects in two different categories.

First aspect you've selected

- a. What is the aspect? **Energy Use**
- b. Is this aspect identified as significant in your EMS? ☒ Yes ☐ No
- c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.
- ☐ Option A: Absolute value (Quantity/Units)
- ☒ Option B: In terms of units of production or output **266,595 mmBTU/lb (Quantity/Units)**

d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.

- ☐ Option A:
Absolute value (Quantity/Units)
- ☒ Option B:
In terms of units of production or output 232,570 mmBTU/lb (Quantity/Units)

e. How will you achieve this improvement?

Ciba Newport is committed to reduction of ca. 13% over the next 3 years by optimization of our solvent recovery process, control of heating and cooling in buildings and improvement in utilities such as nitrogen and steam generation plants. We track our progress quarterly and provide input to site management via our management review process.

Second aspect you've selected

a. What is the aspect?

Air Emissions - emission of toxics

b. Is this aspect identified as significant in your EMS?

☒ Yes ☐ No

c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.

- ☒ Option A:
Absolute value 81,820 lbs/yr (Quantity/Units)
- ☐ Option B:
In terms of units of production or output (Quantity/Units)

d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.

- ☒ Option A:
Absolute value 24,294 lbs/yr (Quantity/Units)
- ☐ Option B:
In terms of units of production or output (Quantity/Units)

e. How will you achieve this improvement?

The Newport Site has a thermal oxidation unit (TOU) that incinerates process off-gases. As improvements are made to the operations, more sources are being connected to the TOU. In addition, several sources of VOC emissions have been eliminated through introduction of our new Phenix QA process.

Third aspect you've selected

a. What is the aspect?

Air Emissions - NOx emissions reductions

b. Is this aspect identified as significant in your EMS?

☒ Yes ☐ No

c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.

☒ Option A:
Absolute value 23,981 lbs/yr
(Quantity/Units)

☐ Option B:
In terms of
units of production
or output (Quantity/Units)

d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.

☒ Option A:
Absolute value 10,980 lbs/yr
(Quantity/Units)

☐ Option B:
In terms of
units of production
or output (Quantity/Units)

e. How will you achieve this improvement?

This reduction is the result of several initiatives regarding NOx reduction. A capital project was completed to replace two steam generating boilers with low NOx burner technology, providing a reduction of 8,000 lbs/yr. In addition, a heating unit has been decommissioned, further reducing NOx emission by 3,000 lbs.

Fourth aspect you've selected

a. What is the aspect?

Waste Hazardous waste generation

b. Is this aspect identified as significant in your EMS?

☒ Yes ☐ No

c. What is the current level? You may choose to state this as an absolute value or in terms of units of production or output.

☒ Option A:
Absolute value 1,500,000 lbs/yr
(Quantity/Units)

☐ Option B:
In terms of
units of production
or output (Quantity/Units)

d. What is the improvement you are committing to over the next three years? You may choose to state this as an absolute value or in terms of units of production or output.

☒ Option A:
Absolute value 600,000 lbs/yr
(Quantity/Units)

☐ Option B:
In terms of
units of production
or output (Quantity/Units)

e. How will you achieve this improvement?

Newport has already reduced hazardous waste generation via reclassification of QA mixed alcohols, resulting in a 6 million lb/yr decrease. The target now is to recycle back into the process DPP alcohols, which are currently incinerated as hazardous waste. This will allow the reduction of ca. 900,000 lbs of waste, which will be reclaimed. Long range targets include the reduction of 400,000 lbs of remaining wastes, to be burned as a comparable fuel.

Why do we need this information?

Facilities must demonstrate their commitment to public outreach and performance reporting. You should have appropriate mechanisms in place to identify community concerns, to communicate with the public, and to provide information on your environmental performance.

What do you need to do?

- Describe your approach to public outreach.
- List three references who are familiar with your facility.

1 How do you identify and respond to community concerns?

Newport is an active member of the American Chemical Council (formerly CMA) and adheres to all the codes of Responsible Care. We have an active community action program, and we received the 1999 award for best industry for community outreach (article attached). The community is updated continuously of ongoing programs at the Site, and Ciba publishes an external communication (Community Palette) which focuses on current issues and performance. We have a community complaint system that requires any complaint be answered within 1 hour 24 hours/day. We also are involved with local activities such as the annual Christina River Cleanup and donations to local schools. Employees volunteer for mentoring programs as well.

2 How do you inform community members of important matters that affect them?

3 How will you make the Achievement Track Annual Performance Report available to the public?

- ☐ Website www.
- ☒ Newspaper
- ☐ Open Houses
- ☐ Other

- 4 Are there any ongoing citizen suits against your facility? ☐ Yes ☒ No

If yes, describe briefly in the right-hand column.

5 List references below

	Organization	Name	Phone number
<i>Representative of a Community/ Citizen Group</i>	Town of Newport	Mayor Don Mulrine	302 994 6403
<i>State/Local Regulator</i>	State of Delaware - Department of Natural Resources and Environmental Control	Nick DiPasquale, Secretary	302 739 4403
<i>Other community/local reference</i>	New Castle County	Jim Houston, Department Head	302 323 2611

On behalf of Ciba Specialty Chemicals, Newport Site
[my facility],

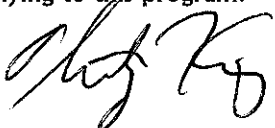
I certify that

- I have read and agree to the terms and conditions, as specified in the *National Environmental Achievement Track Program Description* and in the *Application Instructions*;
- I have personally examined and am familiar with the information contained in this Application (including, if attached, the Environmental Requirements Checklist). The information contained in this Application is, to the best of my knowledge and based on reasonable inquiry, true, accurate, and complete, and I have no reason to believe the facility would not meet all program requirements;
- My facility has an environmental management system (EMS), as defined in the Achievement Track EMS requirements, including systems to maintain compliance with all applicable federal, state, tribal, and local environmental requirements, in place at the facility, and the EMS will be maintained for the duration of the facility's participation in the program;
- My facility has conducted an objective assessment of its compliance with all applicable federal, state, tribal, and local environmental requirements, and the facility has corrected all identified instances of potential or actual noncompliance;
- Based on the foregoing compliance assessment and subsequent corrective actions (if any were necessary), my facility is, to the best of my knowledge and based on reasonable inquiry, currently in compliance with applicable federal, state, tribal, and local environmental requirements.

I agree that EPA's decision whether to accept participants into or remove them from the National Environmental Achievement Track is wholly discretionary, and I waive any right that may exist under any law to challenge EPA's acceptance or removal decision.

I am the senior facility manager and fully authorized to execute this statement on behalf of the corporation or other legal entity whose facility is applying to this program.

Signature/Date

 8.25.00

Printed Name/Title

Philip King
Vice President, US Business Operations

Facility Name

Ciba Specialty Chemicals

Facility Street Address

205 South James St.

Facility ID Numbers

NPDES 0000400
DED9808300400

Agency program. Please direct inquiries to 1-888-339-PTRK or e-mail
ptrack@indecon.com. Mail completed applications to:

The Performance Track Information Center
c/o Industrial Economics Incorporated
2067 Massachusetts Avenue
Cambridge, MA 02140

National Environmental Achievement Track

Environmental Requirements Checklist

The following *Checklist* is provided to assist facilities in answering *Section A, Tell us about your facility,* Question 6. The *Checklist* is given to help facilities identify the major federal, state, tribal, and local environmental requirements applicable at their facilities. The *Checklist* is not intended to be an exhaustive list of all environmental requirements that may be applicable at an individual facility. .

If you use this *Checklist* and choose to submit it with your application, fill in your facility information below and enclose the completed *Checklist* with your application (see instructions).

Facility Name:

CIBA SPECIALTY CHEMICALS

Facility Location:

NEWPORT, DE.

Facility ID Number(s):

DED 980830400

(attach additional sheets if necessary)

Air Pollution Regulations

Check All
That Apply

- | | | |
|-----|--|-------------------------------------|
| 1. | National Emission Standards for Hazardous Air Pollutants (40 CFR 61) | <input checked="" type="checkbox"/> |
| 2. | Permits and Registration of Air Pollution Sources | <input checked="" type="checkbox"/> |
| 3. | General Emission Standards, Prohibitions and Restrictions | <input checked="" type="checkbox"/> |
| 4. | Control of Incinerators | <input checked="" type="checkbox"/> |
| 5. | Process Industry Emission Standards | <input checked="" type="checkbox"/> |
| 6. | Control of Fuel Burning Equipment | <input checked="" type="checkbox"/> |
| 7. | Control of VOCs | <input checked="" type="checkbox"/> |
| 8. | Sampling, Testing and Reporting | <input checked="" type="checkbox"/> |
| 9. | Visible Emissions Standards | <input checked="" type="checkbox"/> |
| 10. | Control of Fugitive Dust | <input checked="" type="checkbox"/> |
| 11. | Toxic Air Pollutants Control | <input checked="" type="checkbox"/> |
| 12. | Vehicle Emissions Inspections and Testing | <input type="checkbox"/> |

Other Federal, State, Tribal or Local Air Pollution Regulations Not Listed Above (identify)

- | | | |
|-----|----------------|-------------------------------------|
| 13. | <u>TITLE V</u> | <input checked="" type="checkbox"/> |
| 14. | <u></u> | <input type="checkbox"/> |

Hazardous Waste Management Regulations

- | | | |
|----|--|-------------------------------------|
| 1. | Identification and Listing of Hazardous Waste (40 CFR 261) | <input checked="" type="checkbox"/> |
| | - Characteristic Waste | <input checked="" type="checkbox"/> |
| | - Listed Waste | <input checked="" type="checkbox"/> |
| 2. | Standards Applicable to Generators of Hazardous Waste (40 CFR 262) | <input checked="" type="checkbox"/> |
| | - Manifesting | <input checked="" type="checkbox"/> |
| | - Pre-transport requirements | <input checked="" type="checkbox"/> |
| | - Record keeping/reporting | <input checked="" type="checkbox"/> |
| 3. | Standards Applicable to Transporters of Hazardous Waste (40 CFR 263) | <input type="checkbox"/> |
| | - Transfer facility requirements | <input type="checkbox"/> |
| | - Manifest system and record-keeping | <input type="checkbox"/> |
| | - Hazardous waste discharges | <input type="checkbox"/> |
| 4. | Standards for Owners and Operators of TSD Facilities (40 CFR 264) | <input type="checkbox"/> |
| | - General facility standards | <input type="checkbox"/> |
| | - Preparedness and prevention | <input type="checkbox"/> |
| | - Contingency plan and emergency procedures | <input type="checkbox"/> |
| | - Manifest system, Record keeping and reporting | <input type="checkbox"/> |
| | - Groundwater protection | <input type="checkbox"/> |
| | - Financial requirements | <input type="checkbox"/> |
| | - Use and management of containers | <input type="checkbox"/> |
| | - Tanks | <input type="checkbox"/> |
| | - Waste piles | <input type="checkbox"/> |
| | - Land treatment | <input type="checkbox"/> |
| | - Incinerators | <input type="checkbox"/> |
| 5. | Interim Status Standards for TSD Owners and Operators (40 CFR 265) | <input type="checkbox"/> |
| 6. | Interim Standards for Owners and Operators of New Hazardous Waste
Land Disposal Facilities (40 CFR 267) | <input type="checkbox"/> |
| 7. | Administered Permit Program (Part B) (40 CFR 270) | <input type="checkbox"/> |

Other Federal, State, Tribal or Local Hazardous Waste Management Regulations Not Listed Above (*identify*)

- | | | |
|----|-------|--------------------------|
| 8. | _____ | <input type="checkbox"/> |
| 9. | _____ | <input type="checkbox"/> |

Hazardous Materials Management

- | | | |
|----|--|-------------------------------------|
| 1. | Control of Pollution by Oil and Hazardous Substances (33 CFR 153) | <input checked="" type="checkbox"/> |
| 2. | Designation of Reportable Quantities and Notification of Hazardous
Materials Spill (40 CFR 302) | <input checked="" type="checkbox"/> |
| 3. | Hazardous Materials Transportation Regulations (49 CFR 172-173) | <input checked="" type="checkbox"/> |
| 4. | Worker Right-to-Know Regulations (29 CFR 1910.1200) | <input checked="" type="checkbox"/> |
| 5. | Community Right-to-Know Regulations (40 CFR 350-372) | <input checked="" type="checkbox"/> |

Other Federal, State, Tribal or Local Hazardous Materials Management Regulations Not Listed Above (identify)

6. _____ ☐
7. _____ ☐

Solid Waste Management

1. Criteria for Classification of Solid Waste Disposal Facilities and Practices (40 CFR 257) ☐
2. Permit Requirements for Solid Waste Disposal Facilities ☐
3. Installation of Systems of Refuse Disposal ☐
4. Solid Waste Storage and Removal Requirements ☐
5. Disposal Requirements for Special Wastes ☐

Other Federal, State, Tribal or Local Solid Waste Management Regulations Not Listed Above (identify)

6. _____ ☐
7. _____ ☐

Water Pollution Control Requirements

1. Oil Spill Prevention Control and Countermeasures (SPCC) (40 CFR 112) ☒
2. Designation of Hazardous Substances (40 CFR 116) ☒
3. Determination of Reportable Quantities for Hazardous Substances (40 CFR 117) ☒
4. NPDES Permit Requirements (40 CFR 122) ☒
5. Toxic Pollutant Effluent Standards (40 CFR 129) ☐
6. General Pretreatment Regulations for Existing and New Sources (40 CFR 403) ☒
7. Organic Chemicals Manufacturing Point Source Effluent Guidelines and Standards (40 CFR 414) ☒
8. Inorganic Chemicals Manufacturing Point Source Effluent Guidelines and Standards (40 CFR 415) ☐
9. Plastics and Synthetics Point Source Effluent Guidelines and Standards (40 CFR 416) ☐
10. Water Quality Standards ☒
11. Effluent Limitations for Direct Dischargers ☐
12. Permit Monitoring/Reporting Requirements ☒
13. Classifications and Certifications of Operators and Superintendents of Industrial Wastewater Plants ☒
14. Collection, Handling, Processing of Sewage Sludge ☐
15. Oil Discharge Containment, Control and Cleanup ☒
16. Standards Applicable to Indirect Discharges (Pretreatment) ☒

Other Federal, State, Tribal or Local Water Pollution Control Regulations Not Listed Above *(identify)*

17. _____ ☐
18. _____ ☐

Drinking Water Regulations

1. Underground Injection and Control Regulations, Criteria and Standards (40 CFR 144, 146) ☐
2. National Primary Drinking Water Standards (40 CFR 141) ☐
3. Community Water Systems, Monitoring and Reporting Requirements (40 CFR 141) ☐
4. Permit Requirements for Appropriation/Use of Water from Surface or Subsurface Sources ☐
5. Underground Injection Control Requirements ☐
6. Monitoring, Reporting and Record keeping Requirements for Community Water Systems ☐

Other Federal, State, Tribal or Local Drinking Water Regulations Not Listed Above *(identify)*

7. _____ ☐
8. _____ ☐

Toxic Substances

1. Manufacture and Import of Chemicals, Record keeping and Reporting Requirements (40 CFR 704) ☒
2. Import and Export of Chemicals (40 CFR 707) ☒
3. Chemical Substances Inventory Reporting Requirements (40 CFR 710) ☒
4. Chemical Information Rules (40 CFR 712) ☒
5. Health and Safety Data Reporting (40 CFR 716) ☒
6. Pre-Manufacture Notifications (40 CFR 720) ☒
7. PCB Distribution Use, Storage and Disposal (40 CFR 761) ☒
8. Regulations on Use of Fully Halogenated Chlorofluoroalkanes (40 CFR 762) ☐
9. Storage and Disposal of Waste Material Containing TCDD (40 CFR 775) ☐

Other Federal, State, Tribal or Local Toxic Substances Regulations Not Listed Above *(identify)*

10. _____ ☐
11. _____ ☐

Pesticide Regulations

- | | | |
|----|--|--------------------------|
| 1. | FIFRA Pesticide Use Classification (40 CFR 162) | <input type="checkbox"/> |
| 2. | Procedures for Disposal and Storage of Pesticides and Containers
(40 CFR 165) | <input type="checkbox"/> |
| 3. | Certification of Pesticide Applications (40 CFR 171) | <input type="checkbox"/> |
| 4. | Pesticide Licensing Requirements | <input type="checkbox"/> |
| 5. | Labeling of Pesticides | <input type="checkbox"/> |
| 6. | Pesticide Sales, Permits, Records, Application and Disposal Requirements | <input type="checkbox"/> |
| 7. | Disposal of Pesticide Containers | <input type="checkbox"/> |
| 8. | Restricted Use and Prohibited Pesticides | <input type="checkbox"/> |

Other Federal, State, Tribal or Local Pesticides Regulations Not Listed Above *(identify)*

- | | | |
|-----|-------|--------------------------|
| 9. | _____ | <input type="checkbox"/> |
| 10. | _____ | <input type="checkbox"/> |

Environmental Clean-Up, Restoration, Corrective Action

- | | | |
|----|---|--------------------------|
| 1. | Comprehensive Environmental Response, Compensation and Liability
Act (Superfund) <i>(identify)</i> | |
| | _____ | <input type="checkbox"/> |
| | _____ | <input type="checkbox"/> |
| 2. | RCRA Corrective Action <i>(identify)</i> | |
| | _____ | <input type="checkbox"/> |
| | _____ | <input type="checkbox"/> |

Other Federal, State, Tribal or Local Environmental Clean-Up, Restoration, Corrective Action Regulations Not Listed Above *(identify)*

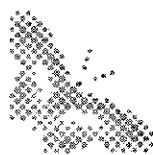
- | | | |
|----|-------|--------------------------|
| 3. | _____ | <input type="checkbox"/> |
| 4. | _____ | <input type="checkbox"/> |



The Swiss Association for Quality and Management Systems

SQS herewith certifies that the company named below has an appropriate management system which meets the requirements of the international standards for quality management and quality assurance (ISO 9001) as well as for environmental management (ISO 14001) and issues the company

Ciba



Ciba Specialty Chemicals Corp.

US-Newport, DE 19804-2490

the

SQS Certificate ISO 9001 / ISO 14001

on the basis of the audit result

Certified area

Colors division

CH-3052 Zollikofen, 1 July 2000

This SQS Certificate is valid up to and including 30 June 2003

Scope number 12

Registration number 15947-01

Managing Director SQS

President SQS

T. Zahner

Prof. Dr. H. D. Seghezzi



SCES 002, 023



Author (Date): Susan White 7-11-00

Approver (Date): M. D. Nam (7-11-00)

Ciba Specialty Chemicals

Newport Site

ENVIRONMENTAL COMPLIANCE MATRICES AND GUIDELINES

Section: 1.0

Table of Contents

Revision: 31

and Controlled Distribution List

Page 1 of 2

<u>Section</u>	<u>Guide Line No.</u>	<u>Rev. No.</u>	<u>Date</u>	<u>Title</u>	<u>ISO 14001 Reference</u>	<u>ISO 9001 Reference</u>
1.0		31	7/11/00	Table of Contents / Controlled Distribution	4.4.5	4.5
2.0		1	01/15/99	Introduction & Purpose	4.4.5	4.2
3.0		9	4/18/00	Environmental Responsibility and Records Matrices	4.5.3	4.1/4.16
4.0				Newport Site Environmental Compliance Guidelines		
	4.1			<u>Environmental Compliance - General</u>		
	4.1.1	2	01/15/99	Identification of Env. Legal/Regulatory Requirements	4.3.2/4.4.3	4.3
	4.1.2	6	05/28/99	Identification of Environmental Aspects and Impacts	4.3.1	4.3
	4.1.3	4	03/01/99	Environmental Activities Planning	4.3.3/4.3.4	4.1
	4.1.4	6	01/29/99	Environmental Training	4.4.2	4.18
	4.1.5	3	03/01/99	Communication and Reporting of Env. Information	4.4.3	4.3
	4.1.6	3	10/21/99	Regulatory Agency Visits	4.4.3	4.4
	4.1.7	7	10/15/99	Emergency Preparedness and Response	4.4.7/4.5.2	4.4
	4.2			<u>Environmental Compliance - Air</u>		
	4.2.1	9	03/15/00	Compliance With Air Pollution Control Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.9/4.10/ 4.11/4.12
	4.3			<u>Environmental Compliance - Water</u>		
	4.3.1	4	03/01/99	Compliance with NCC Wastewater Permit	4.3.4/4.4.4/ 4.4.6/4.5.1	4.9/4.10/ 4.11/4.12
	4.3.2	7	05/14/99	Compliance with NPDES Stormwater Permit	4.3.4/4.4.4/ 4.4.6/4.5.1	4.9/4.10/ 4.11/4.12
	4.3.3	2	03/01/99	Compliance with Navigable Waterway Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.9
	4.3.4	4	02/15/00	Compliance with SPCC Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.9
	4.4			<u>Environmental Compliance - Solid Waste</u>		
	4.4.1	4	10/15/99	Compl. with Non-Hazardous Solid Waste Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.4/4.8/4.9/ 4.13/4.15

Section 1.0

Table of Contents
and Controlled Distribution List

Page 2 of 2

Revision:31

4.4.2	9	5/3/00	Compl. with RCRA Hazardous Waste Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.3/4.8/4.9/ 4.13/4.15
4.4.3	2	03/01/99	Compliance with TSCA PCB Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.8/4.9
4.4.4	3	10/21/99	Compliance with NESHAP Asbestos Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.18
4.4.5	2	03/15/00	Compliance with Infectious Waste Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.8/4.9/4.15

4.5 Environmental Compliance - Superfund

4.5.1	1	1/15/99	Compliance with Administrative Order	4.3.4/4.4.4/ 4.4.6/4.5.1	4.16
4.5.2	4	03/01/99	Compliance with SARA 312	4.3.4/4.4.4/ 4.4.6/4.5.1	4.16
4.5.3	2	03/01/99	Compliance with SARA 313	4.3.4/4.4.4/ 4.4.6/4.5.1	4.16

5.0**Other**

5.1	2	1/15/99	Third Party Toll Processors and Warehouseurs	4.3.4/4.4.4/ 4.4.6/4.5.1	4.3
5.2	1	01/14/00	Compliance with the Toxic Substances Control Act	4.3.4/4.4.4/ 4.4.6/4.5.1	4.3/4.16
5.3	0	03/01/99	Compliance with Protection of Stratospheric Ozone Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.3/4.16
5.4	1	04/15/99	Compliance OSHA Hazard Communication Regulations	4.3.4/4.4.4/ 4.4.6/4.5.1	4.3/4.16
5.5	0	03/01/99	Compliance with the Chemical Diversion and Trafficking Act	4.3.4/4.4.4/ 4.4.6/4.5.1	4.3/4.16
6.0	18	7/11/00	EMS Forms- Located on the "Q" drive	4.3.4/4.4.4/ 4.4.6/4.5.1	4.16

7.0 Controlled Distribution of Division Environmental Compliance Guidelines

- 7.1 The Environmental Compliance Guidelines are maintained in Shared Folders on the Q drive of the Newport computer system. One controlled copy is maintained with the position listed below and is identified by the wording "Control Copy".

CONTROLLED POSITION
COPY NO.

01 EH&S Administrative Assistant

1999

2000

ENVIRONMENT	
Introduce new processes that reduce natural resource consumption	Introduce new processes that reduce natural resource consumption
By 2001, decrease raw materials utilization per pound of QA product by 50%, using 1993 as a basis	By 2001, decrease raw materials utilization per pound of QA product by 50%, using 1993 as a basis
By 2001, use direct pigmentary process to produce 60% of QA products (80% BY 2005), minimizing the generation of organic and inorganic salts and eliminate red dust	By 2001, use direct pigmentary process to produce 60% of QA products (80% BY 2005), minimizing the generation of organic and inorganic salts and eliminate red dust
By 2005, Sitol replacement, along with QA direct pigmentary (see above).	By 2005, Sitol replacement, along with QA direct pigmentary (see above).
Decrease energy use/pound of product 10% by 2001	Decrease energy use/pound of product 10% by 2001
Decrease emissions to air and water from production processes	Decrease emissions to air and water from production processes
Continue QA surplus methanol production, with a goal of 200Mlbs/yr; by 2000, surplus DPP alcohols will not be burned as hazardous waste	Continue QA surplus methanol production, with a goal of 200Mlbs/yr; by mid-2000, surplus DPP alcohols will not be burned as hazardous waste
In 1999, achieve loading reduction to sewer of: <ul style="list-style-type: none"> • an average BOD of <10,000 lbs/day • an average QA loss of <50 lbs/day • an average DPP loss of <15 lbs/day 	In 2000, achieve loading reduction to sewer of: <ul style="list-style-type: none"> • an average BOD of <10,000 lbs/day • an average QA loss of <50 lbs/day • an average DPP loss of <15 lbs/day
Continuously reduce SARA TRI releases at a rate greater than other Delaware manufacturers	Continuously reduce SARA TRI releases at a rate greater than other Delaware manufacturers
SAFETY	
Have a safety program owned by every employee	Have a safety program owned by every employee
During 2000, have systems in place to be qualified to become an OSHA Star (VPP) site	By end 2000, be qualified to become an OSHA Star (VPP) site
Goals: Freq.=0.0, LWDI=0.0, FA/OSHA's>7.0	Goals: Freq.=0.0, LWDI=0.0, Severity=0.0
95% completion of all Red Border Reports within 30 days of incident; 95% completion of recommendations within Red Border Time Line.	100% completion of all Red Border Reports within 30 days of incident; 100% completion of recommendations within Red Border Time Line.
Completion of all scheduled PHA's by 4Q99	Completion of all scheduled PHA's on time

WILMINGTON, DEL.
MARCH 19, 2000

Sunday News Journal

Delaware's Top
50 Employers
Page 72

BEST IN THE BUSINESS

DELAWARE'S OUTSTANDING COMPANIES



■ Best Place to Work ■ Up & Coming ■ Most Involved in the Community



**Banking
& Finance**
Page 11



**Retail &
Service**
Page 19



**Pharmaceuticals
& Health Care**
Page 28



Chemicals
Page 33



Manufacturing
Page 48



Technology
Page 53



**Tourism
& Gaming**
Page 59

BEST IN THE BUSINESS

MARCH 19, 2000 ***
SUNDAY NEWS JOURNAL 3

News Journal panel picks top firms

The News Journal's annual survey of Delaware's economy and the businesses that fuel it has a new name and look this year.

The Best in the Business publication highlights Delaware's outstanding companies in seven categories.

For the first time, readers, workers and company executives nominated firms based on their achievements and contributions to the community. An independent panel of business leaders selected by The News Journal reviewed 58 nominations and chose companies as the best in their respective industry.

The 11-member panel represented business leaders from throughout the state. They awarded companies in the following categories:

■ **Best place to work** — For com-

panies that offer a variety of benefits and perks to employees juggling careers and families.

■ **Community involvement** — For firms that donate time, money and services to area charities.

■ **Up & coming** — To highlight growing and innovative firms.

Another category — **Company to watch** — was added to recognize firms that scored well and are expected to have bright futures.

The industry categories:

- Banking & finance
- Chemicals
- Manufacturing
- Pharmaceuticals & health care
- Retail & service
- Technology
- Tourism & gaming

Nominations were received from

throughout the state. Companies then were asked a series of questions about their growth, charitable contributions and donations, workplace perks and technological advancements. Panel members studied the nominations and discussed their strengths before choosing 27 winners.

The group decided to not present awards for the best place to work among the chemical industry and company to watch in pharmaceutical and health care.

In addition to the Best in the Business categories, this special section outlines Delaware's economic climate.

Triff Alatzas,
assistant business editor

Plus these features

Educational programs	39
Banks	44
Top employers	72
Credit unions	79

About this section

Lists: Tairen McCollister and Amy Dietrich

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INSIDE

**Banking
& Finance**
Page 11

**Retail &
Service**
Page 19

**Pharmaceuticals
& Health Care**
Page 28

Chemicals
Page 33

Manufacturing
Page 48

Technology
Page 53

**Tourism
& Gaming**
Page 59

There's A New CASTLE On The Block

Deals are

**NEW 2000
HYUNDAI ACCENT**
28 NOW AVAILABLE



NOT A
LEASE
YOU
OWN IT

SALE PRICE \$7,797
DELIVERED
ONLY \$149 DOWN
\$149 MONTH

- Power Steering
- Remote Mirrors
- AM/FM Stereo w/cass.
- Tinted Glass
- Rear Window Defroster
- Interm. Wipers

**NEW 2000
HYUNDAI ELANTRA**
85 NOW AVAILABLE



NOT A
LEASE
YOU
OWN IT

SALE PRICE \$9,999
DELIVERED
ONLY \$199 DOWN
\$199 MONTH

- Power Steering
- Rear Window Defrost
- AM/FM Stereo w/cass.
- Power Windows
- A/C
- Power Mirrors
- Power Locks
- TRT

**NEW 2000 ACURA
INTEGRA 3 DR. LS**
25 NOW AVAILABLE



Model DC435
#2474

SALE PRICE \$16,997
DELIVERED

- 4 Cylinder
- 5 Speed
- Air Conditioning
- Pwr Steering & Brakes
- Pwr Windows & Locks
- Pwr Moonroof
- AM/FM CD Player
- Aluminum Wheels
- Rear Window Defroster
- Tinted Glass

**NEW 2000
ACURA T.L.**
25 NOW AVAILABLE



LEASE FOR \$349
FOR 36 MONTHS

*\$2500 cap cost reduction & inception fees.
Tax & tags extra. 12,000 mi/year.

BEST IN THE BUSINESS

Chemicals

MARCH 19, 2000 ***
SUNDAY NEWS JOURNAL 33

By SETH AGULNICK
Staff reporter

With more than 20,000 employees in Delaware, the chemical industry has long been one of the state's biggest and most vibrant segments.

The DuPont Co., the largest chemical business in the United States, has called Wilmington home since 1802. Many smaller companies, like Formosa Plastics, General Chemical and SPI Polyols, dot the state's landscape.

Experts trace the state's strong chemical makeup to three main factors: the presence of DuPont, the Delaware City oil refinery now operated by Motiva Enterprises and the state's business-friendly attitude.

"Delaware is thought of as a reasonable place to do business. Part of that stems from the fact DuPont has been headquartered here for 200 years," said Bill Wood, executive director of the Chemical Industry Council of Delaware. As Delaware's largest private employer, DuPont has used its political muscle during the years to push for pro-business laws. Experts also credit DuPont with helping to build the transportation and infrastructure that make business run smoothly for its smaller brethren.

Some of those smaller companies, like Wilmington-based Hercules Inc., are direct descendants of DuPont, created during the antitrust movement of the early part of the 20th century. Others, like Ciba Specialty Chemicals of Newport, sell many of their products to DuPont.

"This is a good place to be," said Ciba spokeswoman Jodi Melko. "Delaware is very pro-industry and our biggest customer is right here. This is where we want to be."

Ciba, which has about 300



- **Community Involvement:** Ciba Specialty Chemicals Inc.
- **Up & Coming:** Avecia Inc.
- **Company to Watch:** Hercules Inc.

Delaware employees, recently reaffirmed its commitment to the First State by investing more than \$80 million to modernize its pigments plant.

Another company that's considering expanding in Delaware is Unigema, a specialty chemical maker that's a business unit of London-based Imperial Chemical Industries Plc.

Although ICI no longer has its U.S. headquarters in Delaware, it employs about 350 people here through Unigema, which has corporate offices in Talleyville and its Atlas Point plant in New Castle.

"We count on Atlas Point as a growth site," said Ron McCoy, Unigema's vice president of operations. Any expansion, he said, is contingent on a favorable interpretation

of new regulations related to the state's Coastal Zone Act.

That law, passed in 1971, prohibited new plants in coastal areas of the state. It showed that chemical companies don't always get their way in Delaware, Wood said.

Some companies, like Delaware City's OxyChem, say they're not likely to expand here, but they aren't going away either. OxyChem, a subsidiary of Texas-based Occidental Chemical Corp., employs about 125 people making water-purification chemicals.

New plants in that field are more likely to sprout where raw materials are less expensive, such as along the Gulf Coast, said Oxychem plant manager Dean Hulsey.

"Even though I don't see growth

prospects, the company is still making the incremental investments to keep our plant modern, and I still believe we have a bright future here," Hulsey said.

For many chemical makers, the global business climate has been a tough one in recent years.

Prices for many chemicals have been depressed while material costs have risen, factors that have led DuPont to turn to other businesses for growth.

DuPont has put new emphasis in recent years on biotechnology in areas like pharmaceuticals and genetically modified seeds. Executives hope such platforms will be more stable and offer more room for growth than its traditional chemicals and fibers segments.

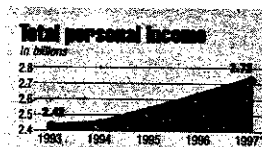
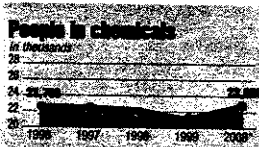
The company also has been cutting jobs during recent years, reducing its global workforce by almost 25,000 in the 1990s. The company employs about 13,000 people in Delaware.

DuPont, though, has said it remains committed to its core chemical businesses and to Delaware. Expansion plans for its Experimental Station call for as many as 1,200 new jobs at the Alapocas research site during the next 20 years.

Overall, the number of chemical industry employees in Delaware has fallen from 33,900 in 1989 to about 21,500 in 1999. But analysts with the state Department of Labor expect that number to head back up, projecting 2,300 new chemical jobs by 2008.

"This would be good news for the state, as this is a very high-income-generating sector," said George A. Sharpley Jr., senior economist with the Delaware Department of Labor.

► Reach Seth Agulnick at 324-2299 or sagulnic@wilmington-gannett.com



The Palette

Ciba



Ciba Specialty Chemicals

Special Community Edition



Spring 1999

*Ciba's Newport facility viewed from
a bridge over the Christina River.*

**RISK MANAGEMENT
SCENARIOS**

RESPONSIBLE CARE®



*Philip King
Vice President, North American Business Operations
Colors Division
Ciba Specialty Chemicals*

Dear Neighbors,

You may have heard recent news reports about the chemical industry's efforts to develop a comprehensive plan to reduce risk while enhancing the safety of its facilities and protecting the communities in which it operates. These Risk Management Plans (RMPs) are in response to recent regulations adopted by the U.S. Environmental Protection Agency (EPA) and the Delaware Department of Natural Resources and Environmental Control (DNREC) to better inform the public about chemicals that are either manufactured or stored in their communities. Under these new regulations, facilities that use, make or store more than a certain amount of regulated chemicals are required to identify the hazards of those chemicals, establish plans to prevent accidental releases, and develop plans to minimize the consequences should they occur.

Before the end of June 1999, about 70,000 facilities across the country will submit their RMP reports to the EPA. In addition to chemical manufacturers, facilities such as paper mills, public drinking water and treatment systems, cold storage facilities, public utilities, and dry cleaners (to name a few of the 21 different industry groups) will also submit their reports to the EPA. Federal and State regulations mandate that only those facilities having specific quantities and types of materials manufactured or stored on site are required to report.

The Ciba Newport facility does not fall under this regulation because of the types and lower quantities of materials manufactured and stored at our site. However, we have voluntarily implemented the RMP as a means of enhancing our safety and

environmental commitments to our employees, our neighbors, and the Delaware community.

During the 1990s, with the support of our Delaware community, Ciba has modernized and expanded our Newport facilities. We have a long history of operating a safe and environmentally responsible facility. And, in the spirit of continuous improvement, our modernized facilities have been designed and constructed to further enhance our Environment, Health and Safety performance.

Risk Management Plans (RMPs) better inform the public about chemicals that are either manufactured or stored in their communities.

This Special Edition Palette provides information about Ciba Newport's voluntary RMP efforts, as well as our Responsible Care® initiatives, which form the foundation of our Environment, Health and Safety (EH&S) programs. This is just one example of how we continue to strive for an open dialogue with our neighbors about their concerns and about what we do to ensure that our site is safe for our employees, our community, and our environment. If you have questions or wish to discuss our RMP efforts in more detail, please contact me.

Sincerely,

*Philip King, Vice President
North American Business Operations*

RISK MANAGEMENT

Planning our RMP Scenarios

While the Ciba Newport facility is not covered under the EPA's Risk Management Program (RMP), we have decided to voluntarily establish and evaluate a worst case and a more realistic scenario as part of our continuous improvement program for safety and environmental protection.

A worst case scenario, as defined by the EPA, is intended to provide an estimate of the maximum possible area that might be affected when all preventive measures fail, causing a release of materials to the environment.

An alternative scenario, what we have defined as a more realistic scenario, is a situation that could occur in the remote event of a failure of all redundant preventive measures already in place.

The evaluation conducted during an RMP analysis focuses on releases from these two scenarios and the distance these materials would have to travel through the air to reach the community. The assessment, based on computer analysis of these off-site concentrations, enables us to determine the effectiveness of our site emergency response program in responding to these scenarios.

Our scenarios include:

- 1) a more realistic scenario involving the release of about 6,000 gallons of isopropanol, commonly known as rubbing alcohol, which is produced in our production processes
- 2) a worst case release of about 3,000 gallons of Therminol®, a solvent used in our production processes.



Accident History

These hypothetical scenarios were developed to inform you and help us reduce risk and prevent accidents. Throughout Ciba's 15-year ownership of the Newport Site, neither of these types of accidents has ever happened. In fact, there has never been an RMP-type incident at our site.

Our top priority is to operate our plant safely—for our employees and for our community!

Prevention Systems

First, our facilities are designed and constructed with built-in safety systems. We proactively implement Responsible Care® (please see last section) to ensure that our facilities are safe and environmentally responsible. Ciba Newport has also implemented a sophisticated Environmental Management System, which is certified by a third party under an international standard. We also expect to soon become the second facility in Delaware to achieve the U.S. Occupational Health and Safety Administration's Voluntary Protection Program "Star" certification, which is awarded to only the safest facilities in the country.

A Plan of Action For Our Community

We are committed to an open and ongoing dialogue with our neighbors and our community on our overall performance. As leaders in safety and environmental performance, not only in the State of Delaware but in the nation, we believe that our voluntary participation in the Risk Management Program will further demonstrate and strengthen our overall safety planning and performance.

Eric Gubler, Executive Director of Modernization, with Governor Corper at the Open House celebrating commissioning of our new manufacturing facility for DPP pigments.

SCENARIOS

More Realistic RMP Scenario

As part of our voluntary RMP program, we have selected an onsite release of isopropanol (more commonly known as rubbing alcohol) as our more realistic scenario.

The Scenario

This hypothetical scenario would involve release of about 6,000 gallons of isopropanol, which is produced in our processes, from a storage tank located in the southwest corner of our property. The release of this material would be caused by an accidental failure of the outlet valve of the tank, resulting in a spill of the heated material to the containment area, causing a portion to evaporate into the air.

Area Affected

Under this hypothetical scenario, the vaporized isopropanol would pass over the western portion of our property, at ground level, moving out over the railroad tracks as it dissipates in the air approximately 10-20 yards beyond the property line.

Duration

The duration of this release beyond the property boundary would last for less than five minutes, traveling in a northern direction. The distance of travel is estimated to be about 180 yards from the spill area.

Community Response

If this type of release were ever to occur, the facility's emergency response system would be activated and emergency alarm horns would be sounded. Because the release would not reach the adjacent residential neighborhood, there would be no need for community response actions. However, whenever our emergency horn is sounded (except for the routine test at 12:30 pm Monday - Friday), we recommend that our neighbors remain indoors, close all windows and shut off all ventilation systems until notified by the local or state emergency management personnel that the situation has been resolved.

Response Actions (Ciba/LEPC)

Under such a scenario, emergency response actions would be immediately initiated to prevent further release of material and to contain and clean up any remaining spilled material. Ciba's onsite

Emergency Response Team (staffed 24-hours per day, 7-days per week) would be at the location in less than three minutes, with the Minquas Fire Department arriving less than five minutes after the first report of the release.

Preventive Measures

As part of our ongoing commitment to ensure the overall safety of our facility, we already have a number of protective measures in place to prevent this type of scenario from occurring. These include

- Frequent inspection of storage tanks;
- Annual preventative maintenance on tanks;
- Continuous monitoring of tank levels;
- Emergency Response training.

Isopropanol

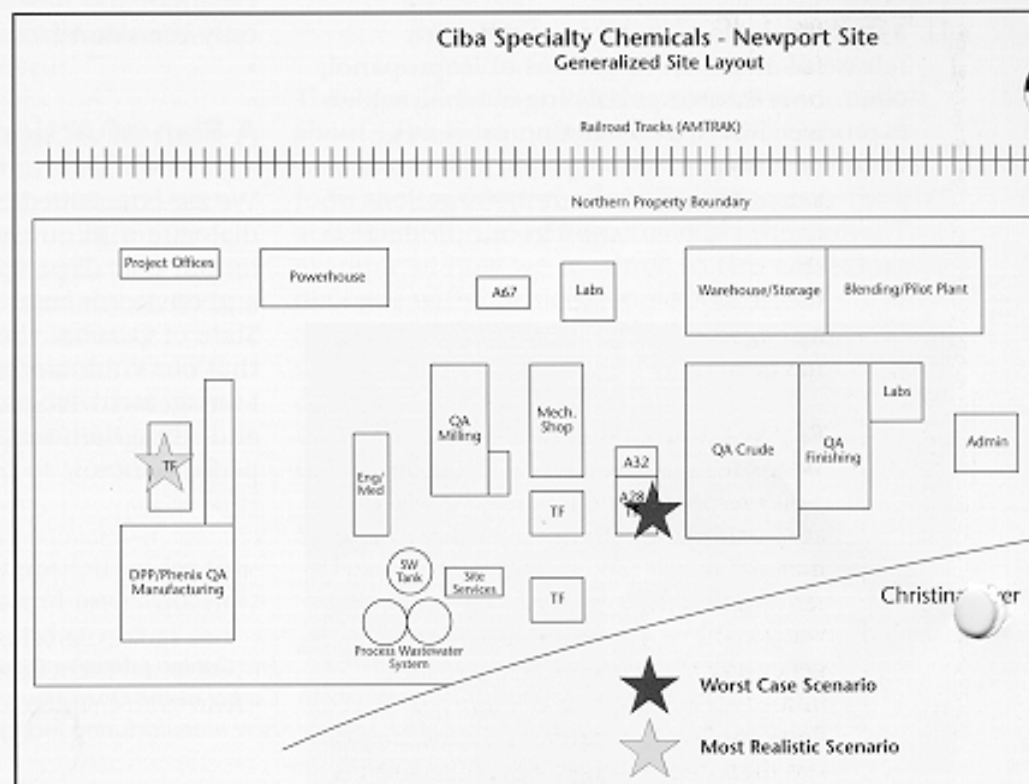
Isopropanol is more commonly known as rubbing alcohol. It is a clear, colorless, flammable liquid. Direct contact can cause irritation to eyes and skin. It is poisonous if swallowed and can be harmful if inhaled at high concentrations.



Key is on back panel

Worst Case RMP Scenario

For the worst case scenario, we have selected an onsite release of Therminol®, a solvent used in Ciba's production processes. It is most unlikely for this scenario ever to happen due to the extensive safety systems already in



place to protect the tank from just such an event. Every safety system/process would be designed to fail for a scenario like this to occur.

The Scenario

This hypothetical scenario would involve the release of about 3,000 gallons of Therminol®, from a tank located in about the center of the manufacturing area. The release of this material would be caused by a failure at the tank's bottom valve. This event would result in the spilling of heated material onto the building floor, causing a portion to evaporate up through the building and out into the air.

Area Affected

Under this hypothetical scenario, the vaporized Therminol® would pass over the plant, at a height of about 50 feet, moving out over the railroad tracks at the northern boundary of our plant as it disperses in the air approximately 1,300 yards beyond the property line.

Duration

The duration of this release beyond the property boundary, under such a scenario, would last for about three to five minutes, traveling in a northern direction to an approximate distance of about 1,500 yards (just under a mile) from the spill area.

Community Response

Were this type of release ever to occur, the facility's emergency response system would be activated, and emergency alarm horns would be sounded to notify the community to take shelter. The recommended action for near-by residents would be to remain indoors, close all windows, and shut off all ventilation systems until notified by the local or state emergency management personnel that the situation has been resolved.

Response Actions (Ciba/LEPC)

Were such a release ever to occur, emergency response actions would be immediately initiated to prevent further release of material and to contain and clean up any remaining spilled material. The building's water cooling system and the plant emergency alarm horns would be activated immediately. Ciba's onsite Emergency Response Team would be at the location in less than three minutes, with the Minquas



Minquas Fire Department Chief Young (left) and Ciba Emergency Response Chief Samson (right) discuss plans, training and mutual aid drills. DPP pigment solvent recovery area in background.

Fire Department arriving less than five minutes after the first report of the release.

Preventive Measures

As part of our ongoing commitment to ensure the overall safety of our facility, we have implemented a number of protective measures to prevent this type of scenario from occurring. These include

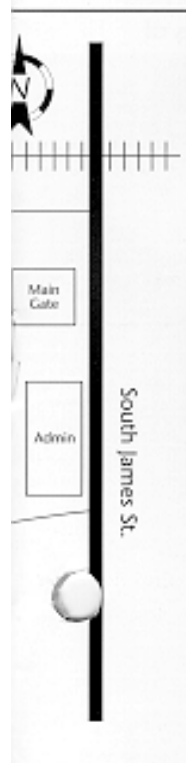
- An extensive preventive maintenance program to ensure the overall safety of our equipment, including process tanks;
- Daily inspection of process equipment;
- Rigorous evaluation and testing of the Therminol® tank every six months to ensure its overall safety;
- A replacement Therminol® tank onsite if evaluation/testing detects a potential safety concern;
- Structural support under the valve to prevent any potential failure.

Therminol®

Therminol® is a clear, colorless, combustible liquid with a geranium-like floral odor. Direct contact can cause irritation to eyes, skin, and the respiratory tract. Prolonged exposure to high concentrations, beyond the recommended safety level, can cause damage to the liver and nervous system. Therminol® can be smelled at extremely low levels that can cause occasional odors in the immediate vicinity of plant. These odors occur at levels that are well below those that would pose any health effects.



Key is on back panel



RESPONSIBLE CARE

Our Commitment to Responsible Care®

The Chemical Manufacturers Association (CMA) initiated its Responsible Care® program in the late 1980s, with its purpose being to assist member companies to continually improve their performance in Environment, Health & Safety (EH&S). Responsible Care® forms the foundation of Ciba Specialty Chemical's EH&S program. We proactively endorse its principles and codes, and we have been an EH&S industry leader long before Responsible Care®.

Guiding Principles

Responsible Care® has ten Guiding Principles, with those most important to our surrounding community summarized below:

- To recognize and respond to community concerns about chemicals and our operations.
- To make EH&S considerations a priority in our planning for all existing and new products and processes.
- To report promptly to officials, employees, customers and the public, information on chemical-related health or environmental hazards and to recommend protective measures.
- To operate our plants and facilities in a manner that protects the environment and the health and safety of our employees and the public.
- To participate with government and others in creating responsible laws, regulations and standards to safeguard the community, workplace and environment.

Management Practice Codes

Responsible Care® has six codes of Management Practice, as summarized below.

- **Employee Health & Safety**
To protect and promote the health and safety of people working at or visiting our site.
- **Process Safety**
To design, build, and operate facilities in a manner that prevents fires, explosions and accidental chemical releases.
- **Community Awareness/Emergency Response**
To help ensure emergency preparedness and foster community right-to-know.
- **Pollution Prevention**
To promote industry efforts to protect human health and the environment by reducing waste generation and pollutant emissions.

- **Product Stewardship**

To promote the safe handling of chemicals at all stages - from initial manufacture to distribution, sale and ultimate disposal.

- **Distribution**

To reduce the risk that chemicals pose to the public, transporters, customers, contractors, company employees and the environment.

We have achieved full conformance with all Responsible Care® requirements.

Ciba Implementation & Verification

Ciba Newport proactively implements initiatives to ensure that our systems conform with the requirements of the six Responsible Care® Management Practice Codes. Currently, our self evaluation indicates that we have achieved full conformance with all Responsible Care® requirements, and we are in the process of continuous improvement to further enhance our Environment, Health & Safety systems.

Last year, Ciba Newport retained an independent EH&S management consulting firm to conduct a detailed assessment of our Responsible Care® systems. While their conclusions included recommendations for continuous improvement, they agreed with our self assessment on the status of implementation. Examples of favorable comments in the report included:

- Management's commitment to Responsible Care®
- Effective EH&S management systems
- A dedicated EH&S staff
- Pollution Prevention performance
- The rapport Ciba Specialty Chemicals employees have established with the local community and local government.

In 1999, Ciba Specialty Chemicals volunteered for a third-party assessment of its implementation of Responsible Care®, called a Management System Verification (MSV). It was coordinated by the Chemical Manufacturers Association. The assessment team also included the Director of the Delaware Emergency Management Agency as a local third-party assessor. Members of the community were also interviewed by the team.

Selected highlights of the Responsible Care[®] Management System Verification report related to Ciba Newport are listed below:

Strengths

- Company management is committed to Responsible Care[®].
- The company is involved in community outreach programs that focus on education, including the company Educational Foundation and "school to work" programs.
- Ciba implements voluntary EH&S programs at its facilities, including OSHA's Voluntary Protection Program (VPP) and ISO14001 registration.
- At Newport, there are "Safety Watch" tours that involve hourly employees in site safety and near miss reporting.
- There is a database to track training at Newport that includes individual employee training requirements, competency tests and training forecasts.

Industry Best Practices

- The company has integrated Responsible Care[®] Codes into their business processes. Responsible Care[®] is the visible EH&S system at Ciba. Ciba reports its EH&S goals to its stakeholders, including employees, community, and commercial partners.
- At Newport, community recovery needs are documented in emergency response plans. This

includes references to specific vendors for assistance with shelter, clothing, food and other community needs.

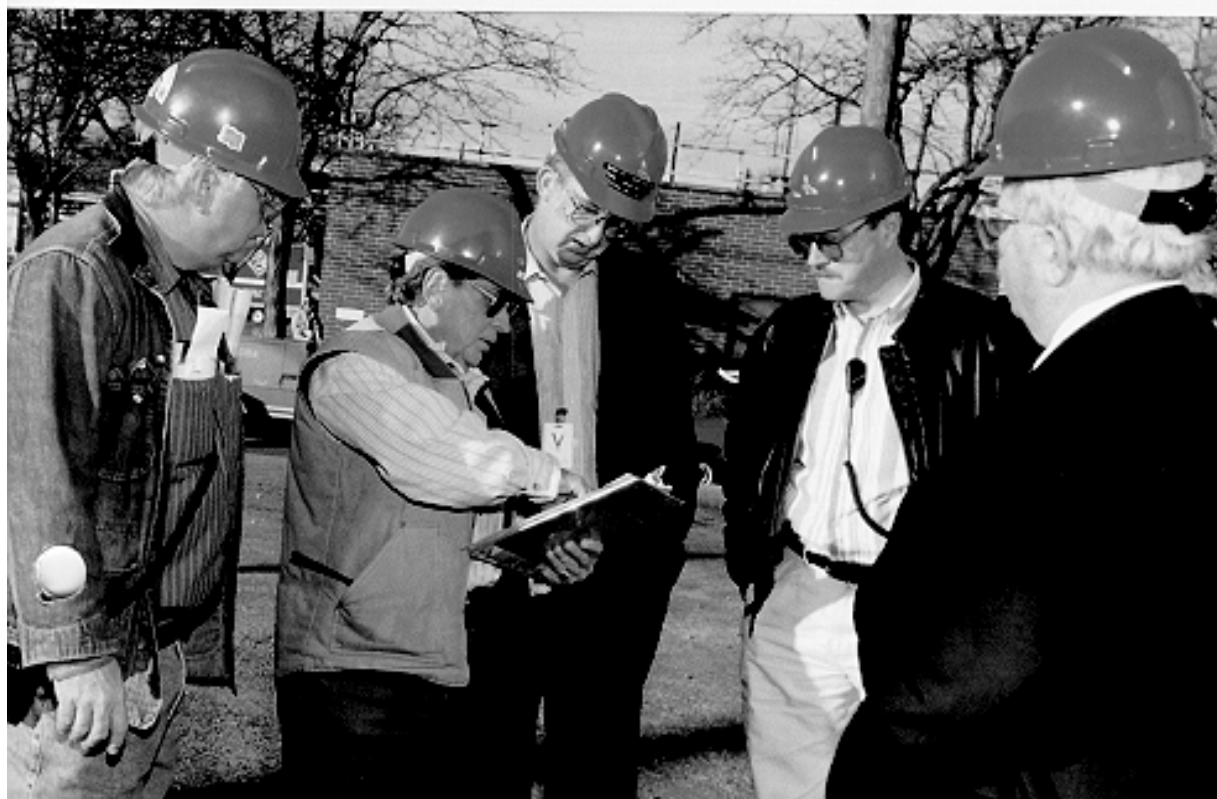
Opportunities for Continuous Improvement

- Develop systems to further involve the community in emergency preparedness planning activities.
- Strengthen systems to measure the effectiveness of community communications.
- Strengthen systems to assess community concerns and measure communications effectiveness.

We are already working on addressing these opportunities for improvement.

Ciba Newport's high priority on safety and environmental performance is not just a commitment, it's a way of life!

A complete copy of the Executive Summary in the Responsible Care[®] Management System Verification report for Ciba Specialty Chemicals is available upon request.



Reviewing Confined Space Entry safety procedures during the Responsible Care[®] Management System Verification. Pictured left to right are Jim Montague and John Kuhn (both Ciba), Marvin Harrington (MSV team), Brian Steelman (Ciba), and Sean Mulhern (MSV team and Director, Delaware Emergency Management Agency).

Key to NFPA Diamonds:

Red (Fire)	4 - Very flammable gases or very volatile liquids 3 - Materials that can be ignited under almost all normal temperature conditions 2 - Materials that must be moderately heated before ignition 1 - Materials that must be preheated 0 - Materials that will not burn
Blue (Health)	4 - Materials that are too dangerous to the health of firefighters to be exposed 3 - Materials that are extremely hazardous to health, but fire areas may be entered with extreme caution and protective equipment 2 - Materials that are hazardous to health, but fire areas may be entered freely with self-contained breathing apparatus 1 - Materials that are only slightly hazardous to health 0 - Materials that would have no health effect
Yellow (Reactivity)	4 - Materials that are readily capable of detonation or explosive decomposition 3 - Materials that when heated and under confinement are capable of explosion 2 - Materials that will undergo a violent chemical change at elevated temperatures 1 - Materials that are normally stable, but may become unstable with other materials 0 - Materials that are normally stable and present no risk
White	Special Information

Your Comments Are Welcome

You may contact Philip King, Vice President of North American Business Operations for Ciba's Colors Division, any weekday from 8:00 am until 5:00 pm at 302-992-1238 to discuss this report or any other aspect of our environment, health and safety performance; or call us anytime at 302-992-5610 and let us know how we're doing.

The Palette

Special Community Edition, May 1999

Managing Editor:	Brian L. Steelman
Contributors:	Matthew D. Watson Terry Flynn Jodi Melko
Masthead Design:	Chris Kays
Design & Layout:	Grace Ann Gibbs

Ciba Specialty Chemicals
North America

Colors

205 South James Street
Newport, Delaware 19804-2490
(302) 633-2000

Ciba



Value beyond chemistry

The Palette

Ciba Specialty Chemicals

Special Community Edition

Ciba



Winter 1999/2000

Dear Neighbor:

During the holiday season we begin to think about our families and friends, and look forward to the time we will spend with them. It is a time to celebrate and look back on the past year. It is also a time to gear up and think forward to an exciting new year, and most especially this year! Just think, there has been in the whole history of time only a small slice of people who have participated in the beginning of a new millennium! You and I have the privilege of standing on the threshold of a new age and peering ahead. We want to extend Season's Greetings to you and your family and share with you a review of the year at the Newport Site, and at the same time look forward to all the exciting new beginnings to come as we ring in 2000.

In this special edition of the Community Palette we have many good things to share. As we have been doing for several years, we have published our SARA Title III report for 1998. As a responsible community partner we feel it is important to show you the progress we have made in reducing our emissions. As you will read, our numbers continue to decline. The proactive approach we are taking to be a good Corporate neighbor has been recognized this year. You will read about the State of Delaware's nomination of our Aquarius IV project in a nationwide EPA contest for Stormwater Excellence. And you know what? We won!!! Ciba's Newport Site was judged to have the best stormwater/fire water collection system in the country. This is a huge achievement and we are beaming with pride. Finally, 1999 has been a full year of operating as the Colors Division. We have completed all the integration activities and have been very successful in supplying our domestic and international customers high quality colors for the inks, paints and plastics industries.

Now, looking forward, we are excited about 2000. You can read about the Phenix project which is already mechanically complete. This massive project is the cornerstone of the other modernization projects completed in the past four years. We will start this facility up and be in full production by September 2000. This will enable us to continue to meet the improvement needs of our customers and make us with certainty the future of the industry. Next year at this time, we will again publish our SARA Title III results. We

anticipate this modern production facility to be the next catalyst for significant reductions in emissions. The challenges are big, but we are confident of success.

As the new millennium approaches, Ciba plans to continue our work in the community to be a good neighbor. Our work with area schools will continue with our mentoring and job shadowing program. And, we will continue our work on the annual Christina River Clean-up on April 15, 2000.

If you have any questions about the contents of this publication or any other inquiry, please feel free to call us on our 24 hour community phone number at 992-5610.



Phil King presenting the 1999 Stormwater Excellence Award to employees.

I wish you and your families a great start to the New Year.

Sincerely,

Philip King, Vice President
North American Business Operations

SARA Title III

SARA Title III, known as the Emergency Planning and Community Right-to-Know Act, is an element of the Superfund Amendments and Reauthorization Act (SARA) of 1986. It was designed to provide information to community members about the chemicals being produced and handled by industries in their communities, thereby improving emergency preparedness.

SARA Title III provides dialogue between the community and businesses. It also develops partnerships between emergency responders, neighbors, community groups, and industry.

Ciba's Newport Site is committed to working closely with its community, local officials, and emergency responders to ensure everyone understands the technical information on our SARA Title III Report. However, our Community Palette is just one way we interact with our community. We also hold two town meetings per year in the Town Hall, and we conduct plant tours for school groups and local organizations. In addition, we support a number of local community organizations including Richardson Park Elementary,

St. Matthew's, The Dave Tiberi Youth Center, and the Christina Conservancy.

The 4 major components of SARA Title III are:

Emergency Planning

These sections are designed to prevent emergencies and improve emergency readiness and response. The New Castle County Local Emergency Planning Committee (LEPC) has developed plans to minimize the impacts of emergencies, and help educate the community in chemical-related hazards and protective measures.

Ciba is a member of the LEPC and is responsible to notify them of any changes to our plant that could affect our emergency response plan. We also work with our local fire departments to improve response capabilities. Many employees are part of our fire brigade, first aid, confined space, and HAZMAT teams. We also have fully equipped emergency response vehicles with protective equipment, breathing equipment and spill containment equipment, which is available to the community.

Ciba Specialty Chemicals Receives US EPA Stormwater Excellence Award

Ciba Specialty Chemicals' Newport Site received the US Environmental Protection Agency's Stormwater Excellence Award this past October. The system, known as Aquarius IV, was judged as the best new environmental protection system for stormwater control in the United States for 1999. Delaware's Department of Natural Resources and Environmental Control (DNREC) nominated Ciba.

Conceptual design of Aquarius IV began in 1995, and construction completion was made in late 1998. Detailed design and engineering was performed by TetraTech, Inc., Christiana Office.

On November 10th the Site held an Employee Recognition and Celebration event to commemorate the achievement.



Above - Responsible for the Aquarius IV Project (left to right): Eric Gubler, Carl Hsu, Brian Steelman, Rip Kuhn, Philip King, John Deming, H. Mital, Ken Taft, Sam Dougherty, Peter Douvres and kneeling in front, Craig Calhoun.



Left - Delaware's Department of Natural Resources and Environmental Control (DNREC) nominated Ciba Specialty Chemicals, Newport for the 1999 Stormwater Excellence Award. Left to right - John DeFriece (DNREC), Charles Schadel (DNREC), Matt Watson (Ciba) and Kevin Donnelly (DNREC).

Emergency Notification

Ciba is required to notify the National Response Center in the event of a spill/release of specified amounts of the chemicals listed under the regulation.

Community Right-to-Know

We hold open houses at regular intervals, address town meetings twice a year, and have a 24-hour hotline to respond to questions from members of the community and the public at large.

Toxic Chemical Release Reporting

Section 313 of SARA Title III requires facilities which produce/use specified amounts of over 300 chemicals to report all environmental emissions to the air, land and water to the US Environmental Protection Agency and state officials. The report covers a calendar year and must be filed by July 1. The data published in this report is from 1998. Ciba reported six listed chemicals in 1998.

Newport Plant Emissions

The graphs illustrate the amount of chemicals the Site reported as emissions and off-site transfers. Emissions are defined as chemicals that leave the Site as airborne releases. Materials which leave the Site through the Publicly Owned Treatment Works, or as material shipped off-site for treatment, disposal, recycling or energy recovery are referred to as off-site transfers.

Released - Figure 1

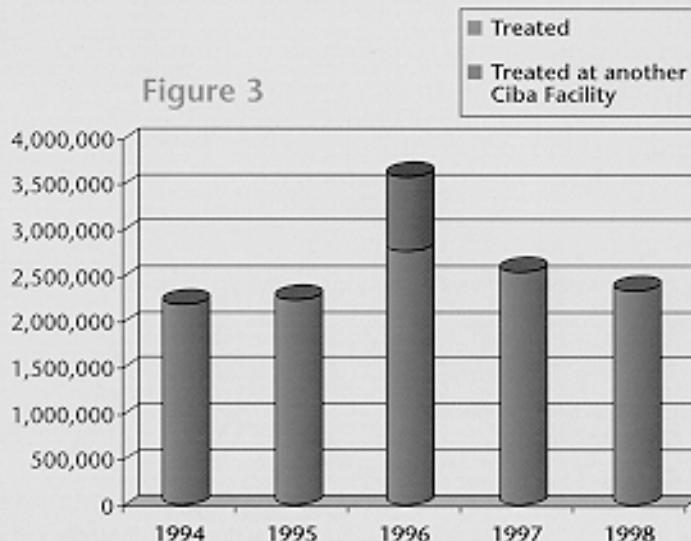
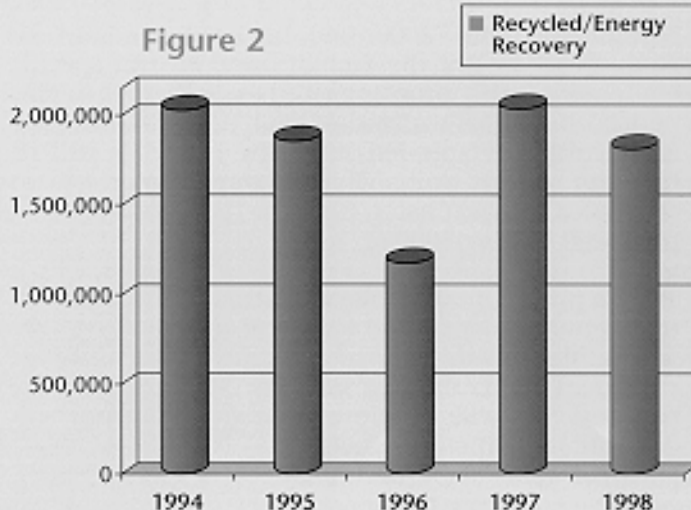
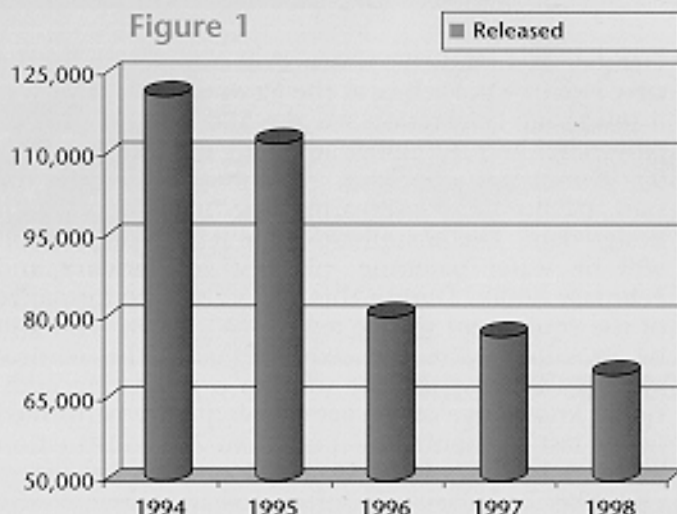
The favorable downward trend continues. Releases enter the air through both permitted sources and fugitive emissions. We continually work to reduce our air releases, and when our modernization project is complete we will see a significant improvement through reduction of these emissions.

Recycled/Energy Recovery - Figure 2

The materials in this class are either recycled or transferred off-site to be burned for energy recovery purposes. Ciba continues to investigate new ways to recycle by-products from our processes.

Treated - Figure 3

These materials are by-products that cannot be recycled currently. We anticipate drastic reductions in these values when our new manufacturing process comes on line.



Phenix QA Project on Schedule

October 31st marked construction completion for the new Phenix QA Facility at the Newport Site. This was a milestone celebration for the \$80 million project. November and December are being used for mechanical completion checkout. This means checking the new facility and comparing the installation with design data. The next phase of the startup preparation will be water batching, planned for January and February 2000. During this period, the performance of the equipment will be tested with water. This will be executed with the sequencing of the control systems, which gives the start-up organization additional knowledge of the actual job quality performed in the last 14 months by more than 280 construction personnel. All this will be done by the future operators together with the project team. Water batching is an important training tool for the operators that provides integrated knowledge of the future production, and demonstrates how process, equipment and automation function together.

March and April 2000 will be used to drain all equipment, to dry the facilities and to run specific equipment with process materials. Parallel in this period, liquid raw materials will be filled into the tanks and other needed solid raw materials will be brought to the unit. If everything progresses as scheduled, the first batch from the new facility will be produced in May 2000.

We are proud of our achievements, and look forward to all environmental and technical improvements we will achieve with this new facility. We also are confident that the community surrounding the Newport Site will greatly benefit from the project's environmental performance.

Your Comments Are Welcome

You may contact Philip King, Vice President of North American Business Operations for Ciba's Colors Division, any weekday from 8:00 am until 5:00 pm at 302-992-1238 to discuss this report or any other aspect of our environment, health and safety performance; or call us anytime at 302-992-5610 and let us know how we're doing.

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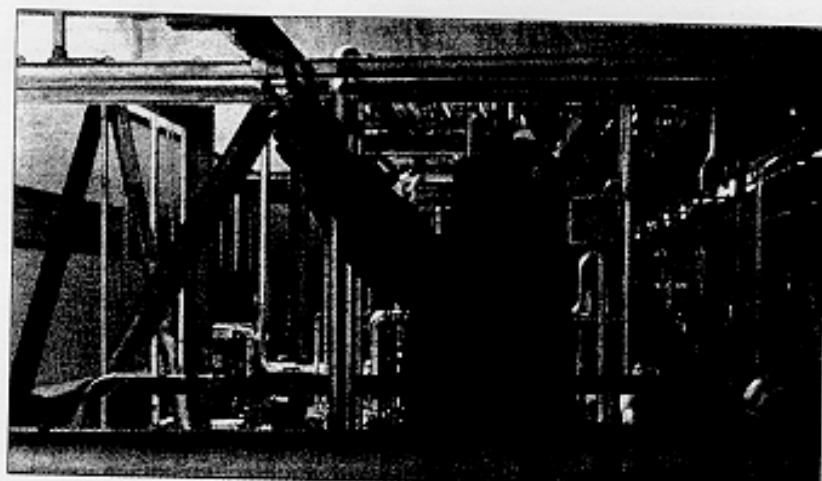
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Ciba

Value beyond chemistry



BEST IN THE BUSINESS Chemicals



Contractor Mike Rozenko works on a tank at Ciba's plant in Newport. The News Journal/JENNIFER CORBETT

A commitment to Newport

By **SETH AGULNICK**
Staff reporter

For executives at Ciba Specialty Chemicals, being a good neighbor means volunteering at local schools, actively participating in the annual Christina River Cleanup and opening the doors of their Newport plant to anyone who wants a look around.

From fielding questions at community meetings to publishing a newsletter that includes emissions reports, Ciba executives say they've tried to keep close contact with local residents.

"We try very hard to be a good neighbor, to make our operations as safe as possible and to protect the environment," said Matthew D. Watson, the company's director of environment, health and safety.

The Newport plant is the U.S. manufacturing headquarters for the Colors Division of Ciba Specialty Chemicals North America.

Workers at the Newport site make pigments used in automotive coatings, paints, synthetic fibers, printing inks, electronics and plastics.

Ciba has operated the site since buying it from the DuPont Co. in 1984. The plant was established in 1901.

In June of last year, Ciba completed an \$80 million modernization project. That, along with a separate upgrade

PROFILE

Ciba

205 S. James St., Newport
Internet address: www.cibasc.com

Full-time employees: 300

What it does: Manufactures color pigments for use in paints, automotive coatings, synthetic fibers, printing inks, electronics and plastics.

Annual sales: Ciba Specialty Chemicals, of which the Newport plant is a part, had \$6 billion in worldwide sales in 1999.

What panel members said: "They've involved the community in their efforts to confine problems. It has been very challenging and it should be recognized."

Rankings released in 1998 showed that Ciba had fallen to 12th among the state's polluters, according to the annual Toxics Release Inventory from the U.S. Environmental Protection Agency and the state Department of Natural Resources and Environmental Control.

Executives say commitment to Newport goes beyond the plant's walls.

Nearly a quarter of the plant's employees help out during the Christina River Cleanup, and the company donates supplies and a boat to the effort.

Its annual meetings at the town hall, its semiannual newsletter and

O'CONOR, PIPE *celebrating*

CONGRATULATIONS TO OUR MILLENNIUM



CHAIRMAN

Mary
Lynch
Newark Office



PRESIDENT

Bob
Jebesen
Cecil Cnty Office



Sharon
McCann
Newark Office



Harlan
Williams
Cecil Cnty Office

Not Pictured: Troy MacB...



BLUE RIBBON

Thomas
Wheeler
Cecil Cnty Office



Cathy
Kempfski
Cecil Cnty Office



Jody
Pezzner
Newark Office

Product Stewardship is the Key to Success

Ciba



1999 Report on
Environmental,
Health and Safety
Performance

Ciba Specialty
Chemicals
North America



An interview with
Dr. Claude Trottier,
Vice President, Environment,
Health & Safety (EH&S)

*What is product
stewardship?*

Dr. Trottier: At Ciba Specialty Chemicals, product stewardship is the key to our business success as well as our overriding commitment to Responsible Care®. Our products are the driving force of our business, and our success is measured by our ability to develop the most innovative products in a manner that is cost-effective, eliminates waste and protects the environment. From cradle to grave, sound product stewardship ensures that the design, development, manufacture, transport, use, and disposal of chemical products are handled responsibly. It is the right way to do business for our customers, our neighbors, our employees and our stakeholders.

*How is product stewardship
incorporated into your
company's practices and
structure?*

Dr. Trottier: We have an interdivisional network that helps to integrate product stewardship with our company's business objectives. The Product Stewardship Network develops strategies that are reviewed and approved by the North American Leadership Team (NALT), which includes the executive heads of all Ciba divisions. The product stewardship program is implemented by network members, line management and employees.

*How is product
stewardship useful?*

Dr. Trottier: Product stewardship allows us to:

- Fulfill our international environmental, health and safety responsibilities for our products and integrate these goals with our business strategies
- Realize a business advantage with customers who are looking for environmentally friendly products and services
- Achieve the cost-effectiveness that is associated with the optimization of raw material use and the control and minimization of waste
- Continuously improve product risk management

*What are the goals of
Ciba's product stewardship
program?*

Dr. Trottier: As the societal demands for product accountability increase, we believe that product stewardship will help shape our customers' buying decisions. Our short-term goals are to determine the level of awareness and understanding of product stewardship principles among our sales force and their customers, and determine how a strong product stewardship program can help us to realize greater gains.

For the long term, we plan to promote our product stewardship values through the marketing of new and existing products. In addition, we will continue to seek improvement throughout our product life cycle, and promote the manufacture and use of safe, environmentally sound products. In short, product stewardship will help us to secure our future.

*How do you measure
progress toward achieving
these goals?*

Dr. Trottier: It is difficult to measure product stewardship success because the accomplishments are not as easily quantifiable as specific waste reduction or pollution prevention goals.

We plan to measure our success through the effectiveness of new product launches that use product stewardship values as key selling points. Also, by benchmarking and sharing best practices throughout the company, we can learn about the initiatives that work and have a sustainable impact on our business objectives.

*What obstacles has
Ciba faced in the area
of product stewardship?*

Dr. Trottier: The initial structure of our Product Stewardship Network included technical and product regulatory specialists who had a very internal, process-driven focus. We are now faced with the challenge of developing an external focus that is responsive to the needs of our customers and stakeholders. This will be accomplished by including more business and marketing individuals in our network. We are energized by the challenge of meeting society's demands for products that are safe and environmentally sound.



A message from Rolf A. Meyer,
Chairman of the Board and
Chief Executive Officer

A Global View of Responsible Care®

At Ciba Specialty Chemicals, our commitment to Responsible Care® stretches well beyond the borders of the Chemical Manufacturers Association (CMA) in the United States. It is a commitment to environmental, health and safety excellence that is company-wide and global. We firmly believe that environmental performance is strongly

linked to our business success. We can serve our customers better by providing them with products that help them meet their own environmental challenges. By reducing our costs associated with raw materials, energy use and waste management, we can realize our business goals. And by seeking continual process improvement, we can ensure that our employees work in an environment that is safe.

I strongly support the work of the North American Responsible Care® networks, and congratulate them on their accomplishments in the areas of safety, pollution prevention, customer and community relations. Their best practices serve as a positive example for our operations worldwide.

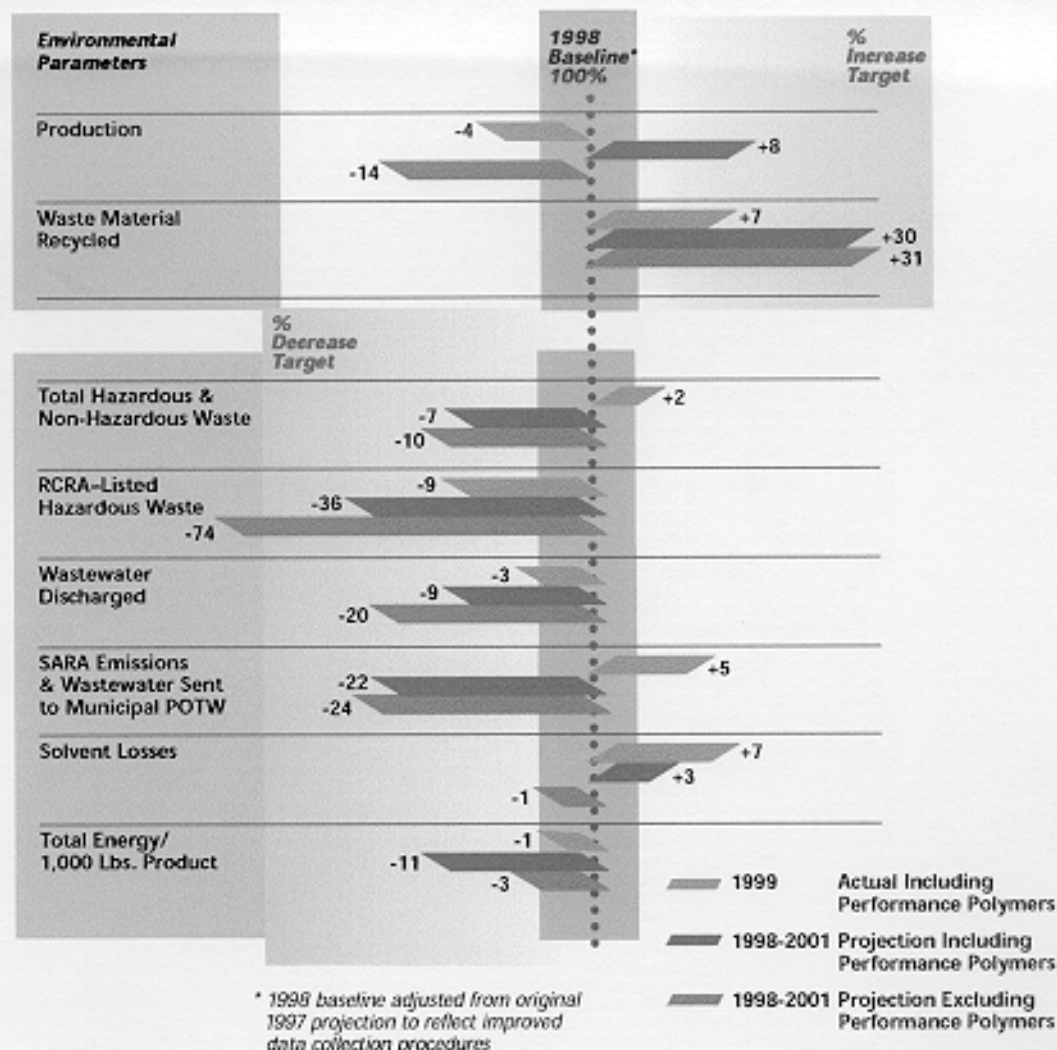
The Pollution Prevention Plan was prepared in 1997 as a four-year guideline for improvements within key areas of pollution prevention and resource conservation. The data presented are calculated based on anticipated production trends and environmental improvement projects planned through 2001.

For this report (see chart at right), adjustments were made to the projections to reflect the announced sale of the Performance Polymers Division to Morgan Grenfell Private Equity (MGPE). Other adjustments reflect changes in product mix, unexpected delays in the implementation of several environmental projects, and redirected project focus.

How Did We Do?

1999 was a mixed year. On the positive side, we implemented many environmental initiatives and processes that resulted in site-specific environmental improvements and bottom line savings to the business. They include:

- Replacing natural gas with a comparable fuel in some processes
- Implementing new processes resulting in higher yield and less waste in our additives and water treatments plants
- Re-using solvents in our pigments, consumer care and water treatments plants
- Using material use accounting to increase yields and significantly reduce organic loads (by 40%)
- Increasing overall product yields and reducing the quantity of liquid and solid waste generated in our dyestuff manufacturing site



These improvements, however, did not yield expected reductions in all of the environmental parameters that are tracked through the Pollution Prevention Plan. Factors that affected our ability to fully realize our goals include:

- Decreased production resulting from an inventory reduction program in the Performance Polymers Division and the sale of a business in the Consumer Care Division
- Delays in implementing the comparable fuels and HCL recycle projects
- By-product quality issues that prevented the reuse of 24 million pounds of salt as originally anticipated
- A new product line generated 2 million pounds of waste not accounted for in the original plan

Are We On Track for 2001?

We are committed to continuous improvement through Responsible Care®, and will continue to track our accomplishments against the environmental parameters that we have set. Between now and 2001, we expect some significant positive effects to be achieved in these areas:

- RCRA Listed Hazardous Waste Generated—Waste management improvements in one of our processes will greatly reduce the quantity of materials currently classified as hazardous waste
- SARA Emissions & Wastewater Sent to a Municipal POTW—The start-up of a new manufacturing unit will use state-of-the-art technology to reduce SARA emissions and wastewater sent to the municipal POTW

- Total Hazardous and Non-Hazardous Waste—Broadening the application of material use accounting at the current sites and implementing the program at additional operations will improve yields and reduce waste

Areas targeted for improvement include:

- Solvent Losses—A solvent reduction team will be formed to determine the technical and economic feasibility of reducing solvent losses
- Total Energy/1,000 Pounds of Product—A team of energy "czars" from each site will be formed to share their successes at conserving energy, and investigate new methods for energy management



Partnering with CMA for Greater Chemical Safety

The EPA, with the support of the CMA and the Environmental Defense Fund, has issued an unprecedented challenge to 900 chemical companies. The companies are being asked to sponsor, by either conducting or funding, environmental and health testing for 2,800 High Production Volume (HPV) chemicals, and to make the data available to the public by 2004. Ciba has accepted the challenge, volunteering to test more than 30 chemicals as part of the HPV program. The company will test products from its Colors, Consumer Care and Additives divisions.

In another collaborative effort, Ciba is supporting the Long-Range Research Initiative of the CMA and the Chemical Industry Institute of Technology (CIIT). This massive research initiative pairs CMA member companies and the highly regarded CIIT in a five-year, \$100 million research effort. The goal—to increase knowledge of the potential impact chemicals may have on human health and the environment. Research programs are focusing on 10 areas, including exposure and risk assessments, respiratory toxicology, ecotoxicity and atmospheric chemistry.

"The Long-Range Research Initiative should make all of us proud to be part of an industry that benefits from a very responsible trade association. The research will be managed with the help of non-industry experts. The process will be open to public inspection. The results will be peer-reviewed and published regardless of the findings."

...Helge Wehmeier, President and CEO of Bayer Corporation, and Chairman of the CMA Board Research Committee



Ciba™ TINUVIN® 123 protects coatings, such as those used on automobiles, from the weathering effects of ultraviolet light.

As Easy as 1-2-3

Ciba scientists used an extraction process to separate and reuse a valuable raw material from an alcohol by-product in the production process for Ciba™ TINUVIN® 123. Recycling the raw material back into the process and selling some of the alcohol by-product to another company reduced waste by 75% and resulted in considerable raw material purchasing and by-product disposal savings. Through teamwork fostered by the Pollution Prevention Network, the Additives and Consumer Care divisions joined forces to continue this success story. Alcohol by-product recovered from the TINUVIN® 123 process is now recycled into Consumer Care's Ciba™ LODYNE® fluorochemical production process. This makes the TINUVIN® 123 production process virtually waste-free, and saves \$50,000 in annual LODYNE® raw material purchasing costs.



Getting It Down on Paper

The Paper Technology segment of Ciba's Water Treatments business is playing an important role in the reinvention of the paper industry. Ciba products and technology are having a positive environmental impact—helping lead the way from environmentally damaging acid-based to more benign alkaline-based paper production systems. Alkaline paper-making systems achieve a longer-lasting product, improve production efficiency, reduce equipment maintenance, and have environmental advantages.

One Person's Trash is Another's Treasure— The Industrial Version

Working with the Environmental Protection Agency (EPA) and other interested companies, a team of Ciba Specialty Chemicals regulatory and operational specialists achieved a major victory with the publication of the Final Comparable Fuel Rule in the Federal Register. This ruling established new comparable fuel specifications, and opened the way for companies to use solvents as an energy source, rather than having to merely dispose of them. It allows Ciba scientists and their counter-

parts at other companies to use solvents—which were formerly waste streams—as co-products or substitute fuels. This proactive measure is already benefiting our natural resources and encouraging pollution prevention efforts. The state of Alabama formally adopted the federal rule in June 1999, allowing the McIntosh site to use ignitable solvents as fuel replacing natural gas in their on-site incinerator.



Waste minimization is a priority at Ciba's McIntosh, Ala., plant.

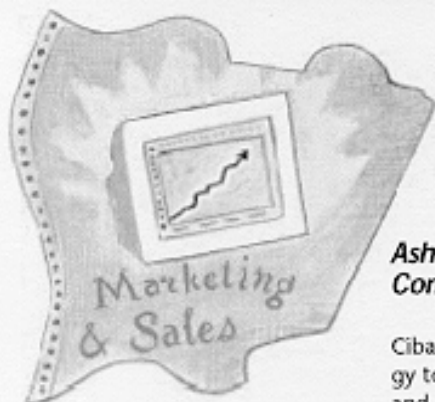
How Green is Our Business?

Bringing a new product to market is a challenging mix of art and science. Today, there's an essential new element in that mix—so-called "green chemistry"—which considers environmental impacts as critical to any chemical formula. To help Ciba become even more of a green company, teams of people from Additives Research, Process Development, Production and the business units have formally adopted waste minimization targets for new products. While recognizing that the ideal is zero waste, the ambitious waste management tar-

get is set at 0.5 pound of waste generated for every pound of product produced.

The new target represents our next step along a continuum of Responsible Care®. We see exciting possibilities posed by use of melt processes and water-based reactions as a means of reducing and even some day eliminating the need for solvents, a large component of Ciba's waste. Scientists in the company's Process Development labs in McIntosh are studying how to use such innovations to greater advantage.

Marketing and Sales



Ashless Hydraulic Fluids Have the Competition Going Up in Smoke

Ciba is using ashless technology to deliver environmental and performance advantages in hydraulic fluids. Ciba technology allows customers to do the right thing for the environment and achieve competitive advantages at the same time. Test results show hydraulic fluids formulated with Ciba's ashless packages perform as well as, and in some cases better than, hydraulic fluids containing the zinc-based compound ZnDTP.

Local and regional regulatory initiatives seek to reduce or eliminate substances that may contaminate waterways. One of the targeted compounds is zinc, and thus ZnDTP. Ciba's new ashless formulations are successful substitutes for ZnDTP in hydraulic fluids. They have the company's customers well-positioned if, as many industry members predict, current legislation expands into state or federal regulations restricting ZnDTP.





"We find Ciba to be most effective in providing the information necessary to obtain EPA approval to sell products. Backed by their research on algicides for marine paint, the people at Ciba work closely with us to make the EPA registration process go more smoothly. As a result, we are able to deliver environmentally responsible products in a cost-effective manner."

...Steve Schultz, Global Market Development Director, International Paint

Smooth Sailing

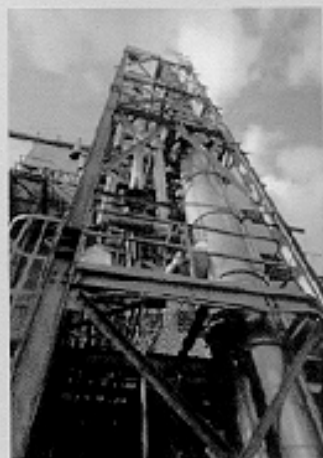
Ciba's IRGAROL® 1051 received US Federal EPA and several state regulatory approvals for use as an algicide in antifoulant marine paints. In addition, there are now several antifouling paints which have cleared the regulatory hurdles and are being sold commercially throughout the US. Antifouling paints are used on the hulls or bottoms of ships and boats. The product is heavy-metal-free and highly target-specific, without harm to aquatic life at expected usage levels. Since it has significant exposure to waterways, however, IRGAROL® 1051 had to pass stringent environmental testing requirements before receiving EPA approval. Specific state regulations posed additional hurdles to commercialization. Ciba regulatory specialists are working closely with customers to incorporate the product into their highly-specific paint formulations. Such efforts provide customers with a true alternative to existing tin-based paints.

Responsible Care® is Good Business

One of Ciba's major customers recently requested a meeting to gather information on the biodegradability and aquatic toxicity of some of the company's additives. The customer is interested in antioxidants, antiwear agents and corrosion inhibitors to help formulate an environmentally friendly industrial gear lubricant. Considering them to be a competitive advantage, the customer complimented the thoroughness of Ciba's lubricant additive Material Safety Data Sheets (MSDS). They noted that they routinely have to probe other suppliers to obtain the information readily available on Ciba's MSDS, citing trace component data as a specific example. Based on ease of access to ecotox/biodegradability data, the customer selected Ciba chemistry for their new formulation—providing further proof that Responsible Care® is good business.

Sold on Product Stewardship

Ciba's Product Stewardship Network is improving the product safety training and awareness of the company's sales force, our direct link to customers. To increase the business value of Responsible Care®, the network distributed a questionnaire to the sales force to determine their familiarity with environmental, health and safety issues, and gather examples of how product stewardship helps secure business gains. The survey is helping to identify our customers' health and safety concerns, gain feedback regarding product handling and processing issues, and address customer use of our MSDS and other technical data. The Product Stewardship Network is also developing a marketing/sales "tool box" to aid sales. The tool box includes training in proactive use of our MSDS to support sales, and a list of company experts available to address product handling issues. Such efforts are helping to further integrate product stewardship into Ciba's business practices, and engaging the company's sales force as even more active product stewards.



Taking Some Pounds Off Our Waste

Ciba's West Memphis, Ark., plant has embarked upon a \$30 million program of environmental and safety improvements. The plant reduced organic materials in wastewater from 5,000 tons/year in 1997 (the base year for analysis) to 2,300 tons in 1999. Continuous improvement efforts are targeted at further reducing organic material in wastewater to 850 tons/year by year-end 2000. The business benefits include reduced environmental impact, yield increases and lower raw material costs. Bottom line savings total in the millions of dollars.

Open Doors, Open Communication

At Ciba Specialty Chemicals, nothing is more important than the safe and proper handling of our products and the safe operation of our facilities. We support the community's right-to-know, and programs that provide the public with meaningful information about environmental, health and safety risks. One such program is Risk Management Planning (RMP), a federal regulation intended to enhance the safety of facilities storing or manufacturing significant amounts of specific chemicals. The purpose of this regulation is to prevent accidents, ensure effective emergency planning, help employees and neighbors understand the potential risks from chemical accidents, and encourage ongoing communication between the company and the community.

All Ciba sites have established extensive accident prevention and emergency response measures to govern the safe handling of chemicals. The Ciba sites that were required to report RMP did so in their local communities by the June 1999 deadline set by the federal regulation.

Representatives from our West Memphis, Ark., and Old Bridge, NJ, sites presented



their RMP initiatives to fellow members of their Local Emergency Planning Committees (LEPC), representatives from area plants and industries, government and local officials, and community residents.

Ciba's McIntosh, Ala., production site, one of the company's largest production facilities in the world, was in the vanguard of RMP reporting. McIntosh released its RMP initiatives to the community in late 1998, well ahead of the deadline. Going above and beyond what they were required to do, Ciba's Newport, Del., and St. Gabriel, La., facilities voluntarily communicated risk information to the community even though they do not use, make or store the quantities of chemicals that are reportable under RMP.



"The opportunity to train together for emergencies is very positive. We are working to revitalize the Local Emergency Planning Committee, and activities like this drill provide our staff with experience that will be beneficial to our community."

...Aaron Deese, Director, Stanly County Emergency Management Agency



Learning to Take the Heat

During one of the hottest weeks of a sizzling North Carolina summer, Ciba's Albemarle production facility hosted hazardous material (HAZMAT) technician training. The course, required by the Occupational Safety and Health Administration (OSHA) for all those who respond to situations involving hazardous materials, was taught by personnel from Ciba's McIntosh, Ala., production site. Participating were Ciba employees from Albemarle and Suffolk, Va., along with personnel from the Stanly County Emergency Management Agency and Albemarle Fire Department. The week-long course culminated in a mock production site evacuation and hazardous material spill. With the heat index topping out well in excess of 100°F, the group worked together seamlessly, proving it would be up to the task of a real emergency.

Tipping Our CAPS

Ciba plants have initiated Community Advisory Panels (CAPs) to provide a forum for citizens to communicate their concerns and discuss ways for industry to improve performance. The CAPs have played key roles in communicating RMP information, and kept community residents informed throughout the successfully completed Superfund remediation process at the McIntosh, Ala., plant. Site management

and environmental, health and safety officials join with community representatives to ensure that Ciba is not just a company in the community, but rather a company of the community. The CAPs address site-specific issues, help to coordinate Open House and other community outreach events, and serve as a catalyst for Ciba's efforts to be a good neighbor.

"The single most important success factor of the Ciba Old Bridge CAP is the openness and honesty of Ciba's management. They answered all of our questions, and provided a great plant tour that has really helped the members of the CAP understand the work that they do."

...Diane Dark, Ciba Old Bridge, NJ, CAP Member

A Comparison of Industry-Wide Safety Statistics

Group		Frequency of OSHA Recordable Incidents	Lost Workday Incidents
Ciba Specialty Chemicals	1998	2.7	1.6
	1999	2.2	0.9
	2000 Target	1.5	0.7
Chemical Manufacturers Association	1997 (Overall)	2.0	0.9
	1998 (Overall)	1.9	0.8
OSHA/Bureau of Labor Statistics (1998)	Manufacturing Industry	9.7	4.7
	Chemical and Allied Products	4.2	2.1



Accounting for Success

Ciba's pollution prevention initiatives are being enhanced through material use accounting (MUA). A tool for tracking incoming raw materials and determining the effectiveness of converting them to useable finished product, MUA brings transparency to pollution prevention. It allows manufacturers to more accurately track and classify waste streams by determining their exact origin. This information can then be used to develop and implement process improvement plans focusing on waste stream reduction and increasing the generation of useable product. The effectiveness of converting raw materials into finished product thus becomes a new measure of environmental performance.

Ciba has successfully implemented MUA at its newly acquired production facilities at West Memphis, Ark., Suffolk, Va., and Old Bridge, N.J. In one year, the West Memphis site has achieved a more than 10% reduction in previously wasted raw material as well as a 30% reduction in waste by-products. With raw material costs accounting for 40 to 60% of the plant's total operating costs, savings are considerable. The Suffolk site has reduced by-product generation by 20% and waste solvent generation by 50%. Still in the developmental phase, Old Bridge has identified significant areas for waste reduction and recycling.



Safety Advances are Significant

We realized a substantial reduction in accident and injury rates in 1999, as follows:

• Frequency Rate	↓ 19%
• Lost Workday Incidents	↓ 44%
• Severity	↓ 58%

These accomplishments are the result of specific safety programs designed to increase line organization awareness and accountability, and supported at the most senior levels of our organization. Some of the programs include EH&S supervisory training, 24-hour notification on accidents, a peer review accident investigation process with emphasis on root causation, auditing to identify best practices, and intranet communications. It is Ciba's goal to place within the industry's first quartile in safety performance.

Frequency Rate—Total number of OSHA recordable injury and illness cases per 200,000 hours worked

Lost Workday Incidents—Number of cases involving days away from work or days of restricted work activity per 200,000 hours worked

Severity—Number of days away from work related to occupational injury or illness per 200,000 hours worked

We Welcome Mexico into the Responsible Care® Mix

Ciba's attention to Responsible Care® does not stop at the border—it commands high priority in the company's Mexican operations as well. Mexico's Responsible Care® initiative is comprised of codes and administrative practices focusing on environmental protection, safety/health, process safety, distribution/transportation, and community protection. All applicable plant operations must be evaluated on an annual basis to ensure compliance with these practices. For Ciba, this means evaluating the company's Tlalpan, Atoto and Puebla manufacturing sites. In 1999, the three sites achieved an average compliance rating of 87.7%, and remain committed to continuous improvement. Until now, Responsible

Care® evaluations have been performed by internal Ciba Mexico auditors from the sites being reviewed. For 2000, the evaluations are being performed by representatives from other Ciba Mexico sites. For 2001, verifications will be performed by a combined group of Ciba and National Association of Chemical Industry (NACI) representatives. The following year, verifications will be carried out by a panel of external and NACI representatives. This is all part of a strategic initiative to broaden the scope of review and share best practices across Mexico's specialty chemicals industry.



Protection Gets Under Our Skin

Ciba is partnering with The Skin Cancer Foundation to promote protective measures against the risk of skin cancer. The company is providing an educational grant to support a public awareness campaign promoting the use of appropriate clothing to protect against the sun's harmful ultraviolet rays. Ciba™ TINOSORB® FD and Ciba™ TINOSORB® FR are products which can be formulated into a fabric detergent (FD) or a fabric rinse (FR) to allow consumers to launder UV protection into their clothes. The products result from Ciba's research in UV technology, and how it can be applied to garments as part of a comprehensive sun protection program.



When called upon, Ciba's McIntosh, Ala., Site Emergency Services operations are also available to respond to critical emergencies at other neighboring businesses. Equipped with the latest in firefighting equipment, including a snorkel containing a camera which allows firefighters to actually see the extent of a fire before going in, the professionally trained McIntosh team is at the ready to handle plant emergencies.



Pumped Up for Safety Beyond Our Fence

Ciba's Newport, Del., site practices what it preaches when it comes to Responsible Care®. Equipped with a new four-wheel-drive pumper which lets it cover ground off limits to other emergency vehicles, the Newport site assists local fire departments on emergency calls. In addition to being the first line of defense in the event of an on-site fire, the site's pumper was called into service when the Delaware Department of Natural Resources and Environmental Control (DNREC) conducted control burns on marshland a few miles from the Ciba site, as well as during a brush fire.



"Using UV curing, we reduce air emissions by 85%. We no longer have to use a methyl ethyl ketone peroxide (MEKP) curing agent, so there are no MEKP fumes, and the styrene fumes are greatly reduced as well. We easily meet our emission limits, conserve material and save money, too. Runoff resin is collected and reused. I save time and space, produce better boards and improve environmental and worker safety performance. This is fantastic!"

...Bob Haakenson, Haakenson Fiberglass Inc.

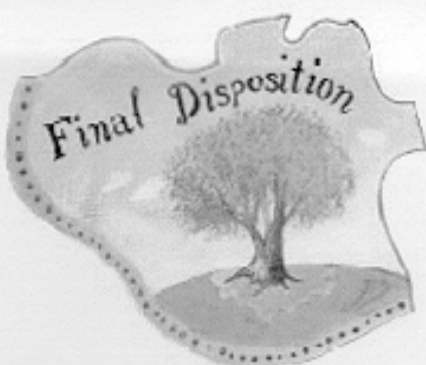
Thanks to Ciba™ IRGACURE® 819: Surf's Up! VOCs Down!

Bob Haakenson of Haakenson Fiberglass Inc. in Goleta, Calif., is famous for hand-crafting surfboards used by the US World Circuit surfing team. He has recently begun using ultraviolet (UV) light or energy, rather than heat, to cure the surfboards, and uses Ciba™ IRGACURE® 819 to deliver environmental advantages.



Packaged for Success

Ciba's Packaging Systems Council manages the many factors that affect delivery of our products in world-class packaging. Environmental and safety parameters are definitely part of the package. With an emphasis on bulk packaging, waste-free water-soluble packaging that can be added directly to the production process, leased container and other recycle/reuse programs, we've been able to reduce the amount of Ciba packaging sent to landfills by more than 10 million pounds.



Paper Technology to the Rescue

The Northeastern Market Segment Environmental Team of Ciba's Paper Technology group is a major supplier of chemicals used by the paper industry for secondary treatment in Canada, a hub of paper production. Secondary treatment is a biological process utilizing microorganisms to remove solids in paper mill effluent. The Environmental Team's Mobile Unit solves customer emergencies like settling problems in effluent treatment equipment. Such problems can put a paper mill in violation of its wastewater discharge permits and bring operations to a halt. Ciba's Mobile Unit can travel to a customer's site and quickly produce the polyacrylamides needed to settle the effluent in the clarifiers. The unit gets the customer's production line back up and running, frequently in less than two hours after pulling into the parking lot. The result: multiple environmental and business successes for our customers and the Northeastern Market Segment Environmental Team.

Distribution & Transportation



Making All the Right Moves

Ciba is taking an approach to waste transportation management that is unique within industry. The company is spearheading a project aimed at ensuring Responsible Care® in waste transportation. We're working with carriers and waste disposal sites who handle our waste to:

- Develop partnerships, improve safety and reinforce environmental awareness
- Increase the quality of service by working more closely with a reduced number of waste transportation carriers

- Decrease administrative burdens
- Cut costs by providing greater volumes of traffic to the selected carriers

Ciba has developed a waste-specific transportation contract which mandates that carriers demonstrate commitment to a variety of Responsible Care®-related legal, safety, and emergency response qualifications prior to hauling Ciba's waste. This effort helps to ensure Responsible Care® throughout the supply chain.

Also under the broad umbrella of product stewardship, Ciba has established a Waste

Audit Council to ensure effective performance from third-party firms that treat wastes that the company is not capable of treating. The Waste Audit Council annually performs over 30 audits of third-party waste treatment sites, monitoring performance to determine if a site can handle Ciba waste. Together with the Purchasing, Transportation and Toll Manufacturing councils, the Waste Audit Council has reduced the quantity of waste generated and the cost for off-site treatment by more than 20%.



A Star is Born

In 1999, Ciba's headquarters and laboratory facility in Tarrytown, NY, attained certification as an elite STAR site under the Occupational Safety and Health Administration's (OSHA) Voluntary Protection Program. This distinction is given only to facilities attaining the highest standards of worker health and safety. The Tarrytown site serves as North American headquarters for both the corporation and its Additives Division, and houses Additives' research and development laboratory. In presenting the distinction, OSHA noted that Ciba Tarrytown's lost work time/injury statistics are 83% below the industry average for comparable work sites. The Tarrytown location joins the company's McIntosh, Ala., and St. Gabriel, La., facilities as OSHA STAR sites.

"...We could not find any significant hazards that were not being addressed, and this is evidenced by your effectiveness in reducing injuries at the site."

...OSHA Audit Team Leader Norman Deitch

You Can Help

At Ciba Specialty Chemicals, we continually assess our work and strive for improvement. This publication is an important tool through which we communicate our Responsible Care® goals to our employees, customers and external stakeholders. Last year, we provided a reader survey to determine the effectiveness of our Responsible Care® report. Responses indicate that the report is a useful tool, especially for external audiences who do not have regular exposure to messages about our company's goals and vision. Much of the survey feedback was incorporated into this year's report. A self-addressed response card is enclosed in this issue as well. Please take a few moments to let us know how we're doing in meeting your information needs.



An Industry Leader

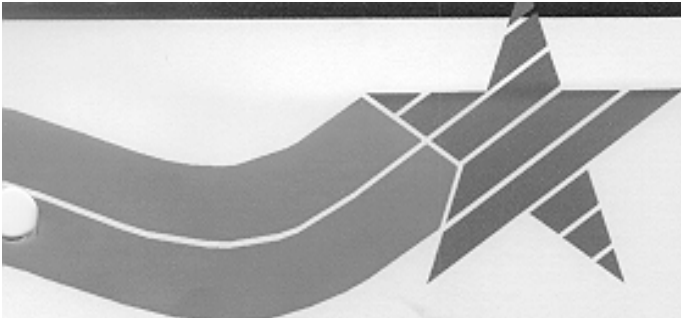
Barbara Taylor, Manager, Safety, Health, Environmental and Regulatory Affairs at Ciba Canada, is the recipient of the prestigious Significant Contribution Award from *OHS Canada*, a national health and safety publication. Taylor was selected from nominees representing all industries in Canada. She is well-known for leadership in the Canadian Chemical Producer's Association (CCPA), which is comparable to the Chemical Manufacturers Association in the US. Taylor participated in WORKSAFE '99, an annual occupational health and safety conference. She discussed Ciba's EH&S training initiatives and the factors that contribute to the program's success, including support from senior management, managers' responsibility for training employees who report to them, employee participation, and measuring and monitoring results.



Weathering the Storm

Ciba's Newport, Del., site is the recipient of the EPA Stormwater Excellence Award. This national award recognizes the site's stormwater/firewater collection and reuse system, known as Aquarius IV. Singled out by EPA as the best environmental protection system for stormwater control in the

US in 1999, the system is designed to capture rainwater and prevent groundwater, spills and firewater from entering the Christina River. Delaware's Department of Natural Resources and Environmental Control (DNREC) nominated Ciba for the award.



North American Leadership Team (NALT) Award for Excellence in Safety

The winner of the 1999 NALT Award for Excellence in Safety is the St. Gabriel, La., production site. The St. Gabriel site has worked for more than 1.5 million hours without a lost-time injury. In fact, the site has not had a lost-time injury since its inception in 1988. The site has earned designation as a STAR site under the OSHA Voluntary Protection Program. STAR distinction represents attainment and maintenance of the highest standards of worker health and safety.

The NALT Award is given on the basis of:

- *Extended periods without lost-time injuries*
- *Exceptional safety turnaround efforts as evidenced by lowered injury/illness rates; lowered workers' compensation costs; and improved environmental, health and safety auditing performance*
- *Absence of OSHA/EPA penalties, property losses*
- *Proactive steps, such as OSHA STAR certification*

Ciba Specialty Chemicals is a leading company dedicated to producing high-value effects for our customers' products. Our specialty chemicals, added in small quantities, enhance the performance, look and feel of the final product.

NALT Environmental Excellence Award

The Newport, Del., production site is the winner of the 1999 NALT Environmental Excellence Award. The Newport site has made significant continuous improvement in reducing emissions and improving waste management. The plant has achieved more than 90% reduction in VOC emissions since 1992, a four-fold reduction in nitrogen oxide emissions, and large reduction in biological oxygen demand (BOD) in its wastewater treatment operations. Criteria for the award include continuous progress in reducing waste generation and air emissions, energy conservation achievements, cost savings, innovation and external recognition of environmental gains.

To learn more about Ciba Specialty Chemicals, please visit our web site at <http://www.cibasc.com>

For more information:
Dr. Claude Trottier
Vice President, EH&S
540 White Plains Road
Tarrytown, NY 10591-9005
914 785 2050
claudet.trottier@cibasc.com



NALT Award for Most Improved Safety Performance

The 1999 Award for Most Improved Safety Performance singles out the Suffolk, Va., site, which reduced its lost-time injuries from seven in 1998 to one in 1999. The site also reduced its accident frequency rate from 5.0 in 1998 to 1.6 in 1999, and has completed the application process for OSHA STAR Voluntary Protection Program designation.

NALT Award for Most Improved Environmental Performance

The Suffolk, Va., site is also the 1999 winner of the NALT Most Improved Environmental Performance Award. The site won this award on the basis of significant reduction in total waste per pound of product, solvent use declines and waste treatment cost savings. Suffolk achieved a 6.8% reduction in total energy usage in 1999 compared to the prior year.

"Safety is more important than profits. Especially in running chemical plants, there can be no safety shortcuts or compromises."

*...Stan Sherman,
CEO and President,
Ciba Specialty Chemicals
North America*



Ciba

Responsible Care® is a registered trademark of the Chemical Manufacturers Association.

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Value beyond chemistry



UNITED STATES ENVIRONMENTAL PROTECTION AGENCY
WASHINGTON, D.C. 20460

SEP 13 1999

Matthew Watson

*Stan - ref. w/ PK
St. Luke's
on 12
Back on
12th to
NY*

OFFICE OF
WATER

Mr. Philip King, Vice President
US Operations, Ciba Specialty Chemicals
Newport - Delaware Site
205 South James Street
Newport, Delaware 19804

Dear Mr. King:

I am very pleased to announce that Ciba Specialty Chemicals has been selected as the first place winner of the Environmental Protection Agency's (EPA) 1999 National Pollutant Discharge Elimination System (NPDES) Program for Storm Water Control Excellence Award for an outstanding storm water management project in the Industrial category. EPA based this selection on your facility's demonstrated innovative and cost-effective achievements for improving storm water quality. Your selection, the result of an extensive national competition, recognizes the exceptional storm water control efforts and dedication of your organization.

We will officially announce the national winners at the EPA Wastewater Management Excellence Awards Ceremony on Monday, October 11, 1999, in New Orleans, Louisiana, at the 72nd Annual Water Environment Federation Conference. My staff will contact you shortly to provide more information regarding the ceremony and conference, and to answer any questions you may have.

Congratulations and thank you for your commitment to excellence in storm water management.

Sincerely,

J. Charles Fox
Assistant Administrator

cc: Senator Joseph R. Biden
Senator William V. Roth, Jr.
Representative Michael N. Castle
Governor Thomas Carper
Regional Administrator, EPA Region III

*Stanley Sherman
Pres. & CEO
CSC Corp
NA*

Colors

June 4, 1999



National NPDES Program for Stormwater Control
Awards Review Committee
Permits Division (4203)
Office of Wastewater Management
US Environmental Protection Agency
401 M Street, SW
Washington DC 20460

Attention: Ms. Betty West

**RE: 1999 National NPDES Program for Stormwater Control Excellence Awards
Application for Ciba Specialty Chemicals Newport Facility**

Dear Ms. West,

The Ciba Specialty Chemicals Newport Site respectfully submits the attached application for your consideration. This application provides the responses to the questionnaire sent by your office May 18, 1999.

The Newport Site is extremely proud of our new stormwater control system, and appreciates the opportunity afforded by the US Environmental Protection Agency and the Delaware Department of Natural Resources and Environmental Control to participate in this program.

We look forward to your comments or questions, and please do not hesitate to contact Mr. Jeff Morris at (302) 992-5775 of my staff at your convenience.

Sincerely,

Matthew D. Watson
Director, Environment, Health & Safety

attachments

CC: J. DeFriece, DNREC
C. Shadel, DNREC
P. King
C. Mackay
J. Morris
B. Steelman
M. Watson
EMS 4.3.2.9

**1999 NATIONAL NPDES PROGRAM FOR STORM WATER CONTROL
EXCELLENCE AWARDS APPLICATION**

I. BACKGROUND INFORMATION

Facility Name: Ciba Specialty Chemicals
Official Facility Representative: Philip King
Title: Vice President US Operations
Telephone Number: (302)-992-1238
Mailing Address: 205 South James Street
Newport, DE 19804

Facility Storm Water Contact: Matthew Watson
Title: Director EH&S
Telephone Number: (302)-992-5726

Political Notification:

US Senators and Representatives For Program's Service Area:

Senator Joseph R. Biden Jr.
Senator William V. Roth Jr.
Congressman Michael N. Castle

State Governor's Name and Address

Governor Thomas Carper
Wilmington Carvel State Building
820 North French Street
Wilmington, DE 19804

Name and Location (Town/State) of Program/Project as it should appear on engraved plaque in the event the award is given:

Ciba Specialty Chemicals
Newport, Delaware

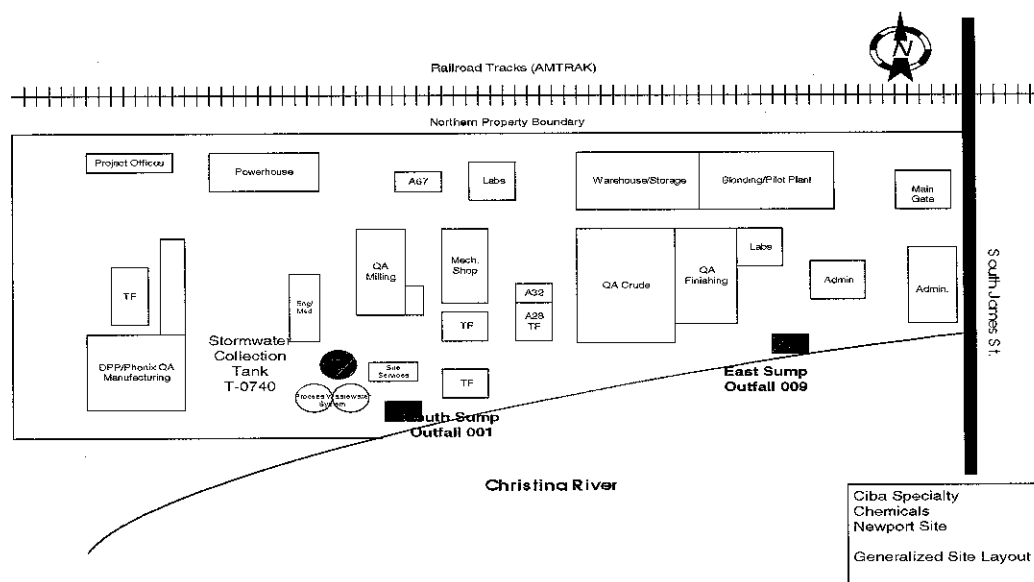
Application Completed By: Jeff Morris
Title: Environmental Engineer

II. PROGRAM/PROJECT DESCRIPTION (Please describe in detail the storm water program or project for which you were nominated. Please use additional sheets when necessary. Attach any diagrams, maps, or other similar materials which support your description.)

1.0 Background

The Ciba Specialty Chemicals Newport Site manufactures organic pigments for various applications in the inks, paints and plastics industries, and is located in Newport, DE. The Site has been operated by Ciba since 1984, and has had industrial operations ongoing at the Site since the turn of the century. The Site is listed on the Superfund National Priorities List (NPL), and cleanup operations are administered by the previous owner, DuPont. Figure 1 presents a generalized site layout for orientation.

Figure 1 - Generalized Site Layout



In 1994, Ciba approved a capital investment program designed to expand and modernize the existing manufacturing facilities and to provide infrastructure improvements for energy efficiency enhancement, process wastewater system upgrades and stormwater runoff control at the Newport Site. The manufacturing expansion and modernization is referred to collectively as the Phenix Project and the infrastructure improvements are referred to as the Aquarius Projects. Table 1 provides a synopsis of these projects.

Table 1 - Modernization at the Newport Site

Project	Program	Objective	Completion Date	Remarks
DPP Manufacturing	PHENIX	Construction of a state-of-the-art manufacturing facility for Diketo Pyrolo Pyrol (DPP), an organic pigment	1997	Designed and constructed to provide environmentally efficient and safe production capacity to the Newport Site
QA Manufacturing	PHENIX	Replacement of the existing Quinacridone synthesis operations with a state-of-the-art facility	2000	Existing operations will be discontinued and demolished. Process wastewater loading is expected to decrease substantially
Boiler Replacement	AQUARIUS I	Replacement of two heating boilers with 2 new low NOX high efficiency boilers	1997	NOX emission reduces 7 fold - while increase in steam capacity realized
SSE Neutralization Improvement	AQUARIUS II	Substitution of neutralizing chemicals to reduce BOD loading to process sewer	1996	BOD reductions realized via substitution of acetic acid with sulfuric acid.
Process Wastewater System Upgrade	AQUARIUS III	Design and installation of new batch process wastewater neutralization system designed to eliminate pH exceedances and equalize loading to POTW	1997	Effective treatment system - better control of Site wastewater and elimination of pH violations to POTW
Stormwater/Fire water Collection and Reuse System	AQUARIUS IV	Collection of first precipitation flush from the Site; prevention of hazardous materials spills from entering Christina River; collection of firewater runoff in the event of an emergency; reuse of collected stormwater to provide process cooling water makeup	1998	System is operational and has proven effective in meeting the goals stated in purpose section.

Upon completion of these projects, the Newport Site will enter the next century as a leader in the manufacture of colorants using the latest manufacturing and environmental technology.

2.0 Best Management Practices Program at the Newport Site

The Ciba Environmental Protection Policy states that Ciba is committed to protecting the environment and will take any action that is necessary to ensure that its raw materials, products, by-products and wastes will not adversely affect human health or the environment, during manufacturing operations and the subsequent distribution, intended use, and final disposal of these materials. Ciba is a member of the Chemical Manufacturer's Association and subscribes to the Responsible Care® program.

The objective of the Newport Best Management Practices (BMP) program is to ensure that operating practices and facility design minimize the potential for release of pollutants into the environment, specifically discharges to the Site stormwater systems. The program describes plant facilities, chemical usage, containment and prevention practices as well as other procedures which have been implemented to minimize environmental releases.

Pigments are manufactured in a batch process 24-hours/day, year-round, except for scheduled and unscheduled shutdowns. Processing equipment includes: raw material storage tanks, reactor & extraction vessels, filters, distillation columns, milling and drying equipment and related pumps, valves and pollution control equipment. All raw materials are received by truck except dimethyl succinate, which is received by railcar. Steam and nitrogen are generated on site.

Process waste water is directed to the facility's Wastewater Neutralization System (WNS) for pH adjustment prior to discharge to the local Publicly Owned Treatment Works (POTW), operated by US Filter on behalf of the City of Wilmington.

The first flush of stormwater is collected and reused on-site as non-contact cooling water, and the cooling tower blowdown is discharged to the process wastewater system. After the first flush, subsequent stormwater is discharged to the Christina River through two outfalls. In the event of a spill, emergency response is carried out in accordance with the Site Emergency Response Plan/ Spill Prevention, Control and Countermeasure (ERP/SPCC) Plan, which is implemented by a trained, on-site team of spill response personnel.

3.0 AQUARIUS IV - Stormwater/Firewater Collection & Reuse System

The Site currently has a National Pollutant Discharge Elimination System (NPDES) permit (DE 0000400) administered by the Delaware Natural Resources and Environmental Control (DNREC) for discharging stormwater and groundwater to the Christina River. The Site is approximately 31 acres in size and roughly 28 acres drains to the stormwater collection system (see attachment 1). Originally, the Site was authorized to discharge from 9 outfalls; however these were consolidated into two (2) new outfalls (001 & 009) with the completion of the Aquarius IV (AQIV) project.

3.1 System Description

The AQIV system divides the Newport site into two areas: the east and west sections. Renovated and new collection system piping has been installed to replace the existing system, and all runoff is directed to two sumps, one for each section. The collection sumps are 30,000 gallons each and equipped with transfer pumps. Transfer of flow from the sumps to the storage tank is accomplished by two pumps, each capable of pumping up to 4,000 gallons per minute.

Lower flow rate requirements rain events of limited intensity are addressed by the use of variable speed function of the sump pumps. Rain events of greater intensity will result in increased pumping rate up to the total flow capacity of 8,000 gallons per minute. Both sumps stormwater

pump discharge lines are equipped with a conductivity probe, a flow switch, a temperature sensor and an air/vacuum release valve. In addition, both sumps are equipped with rain gauges and automatic samplers which sample every overflow event.

New above ground piping transfers collected water to a storage tank. The storage tank is 60' in diameter and 40' high, carbon steel tank with a maximum storage capacity of 850,000 gallons. Approximately a 350,000 gallon capacity will be reserved in the storage tank for fire water and spill protection. In the event of a major fire, up to 1 million gallons of firewater runoff can be collected through the system by allowing overflow from the storage tank to the concrete containment basin of the WNS. Distribution piping is provided from the storage tank to the existing DPP production facility and to the new Phenix QA production facility, which is currently under construction. In addition, with New Castle County approval, transfer from the storage vessel is possible to the process wastewater neutralization system in the event that collected water cannot be used in the plant.

The storm water is pumped for reuse to the DPP cooling tower sump through a pressure filter located upstream of the DPP cooling tower. Based on water usage data, between 25,000 and 50,000 gallons per day of makeup water is needed at the cooling tower.

When the stormwater collection tank capacity is reached during a normal storm event, the system shuts off the sump transfer pumps and allows each sump to overflow to the river. When these sumps overflow, an automatic sampler is actuated that takes compliance monitoring samples of the runoff in accordance with the Site NPDES permit. The tank is allowed to achieve a quiescent state to allow solids settling prior to resumption of pumping to the cooling towers.

3.2 Principle of Operation

The AQIV system has been designed to allow for the performance of several operating functions described below:

3.2.1 Dry Weather Flow Collection and Reuse

The Site stormwater collection system experiences groundwater infiltration. The inflow of this groundwater is directed to the sumps located in the two drainage areas described above, and these sumps transfer the dry-weather flow to the storage tank. This collected water is then fed directly to the Site cooling towers located in the DPP manufacturing area and used as makeup water within the towers. Demand for makeup water has consistently been greater than infiltration and inflow; therefore allowing capacity for collection of stormwater runoff.

3.2.2 Stormwater Collection and Reuse

Stormwater that runs off the Newport Site is also collected for reuse. The system has been designed to capture at least the first ½ inch of precipitation runoff from the Site. This volume contains most of the pollutants that affect the quality of the Site runoff, therefore collection eliminates this loading to the river. The maximum collection capacity of the tank for stormwater runoff has been specified at 500,000 gallons, allowing 350,000 gallons for collection of spills or fire water runoff in the event of an emergency (see below). The Newport Site's BMP program assures that even the first flush meets appropriate pollutant levels for use in the cooling towers at the Site. To further protect these systems, each sump is equipped with an in-line conductivity meter which is used to continuously monitor the pumped water from the sumps. In the event that

overflow to the river. This is most likely to occur during the cold-weather months when salt is applied to the plant roadways.

3.2.3 Hazardous Materials Spill Collection

The Newport Site has an effective spill control and containment plan to prevent the release of hazardous materials to the stormwater collection system. In addition, engineering controls are installed to further minimize the potential for release. However, in the event that a spill were to occur, the AQIV system has been programmed to provide notification alarms in the event that either of the sumps fill too quickly, thus registering a potential spill event. The sump can then be pumped out to a tanker truck and the collected material properly disposed of by trained personnel.

3.2.4 Firewater Collection

In the unlikely event that a fire were to occur at the Newport Site, runoff from fire-fighting activities will be collected in the AQIV system. This is accomplished by allowing the system to operate in normal mode until a volume of 500,000 gallons is reached, at which time the system will not allow any more water to be pumped without over-riding the control system. This is accomplished through the emergency system over-ride function available to the system operators. In conjunction with the agreement of emergency response personnel and Site management, the pumping system may be operated in over-ride until the tank is at capacity (850,000 gallons). After this level is reached, the system stops pumping and alarms that the tank is at high level. The operator may then start pumping the sumps again, causing the tank to overflow and discharge to the WNS containment structure, where there exists over 1 million gallons of excess storage capacity.

3.3 System Control

The AQIV system is controlled using two different programmable logic controllers (PLC's). The East sump is controlled using a Modicon 984 PLC, which is also connected to the WNS. The South sump and storage tank are controlled by a Modicom Quantum series PLC and also controls part of the WNS. Operator interface to the control system is through an InTouch Man-Machine-Interface (MMI).

Inputs to the PLC's include level, flow, and conductivity transmitters, auxiliary contacts and current transmitters from motors, limit switches from control valves, flow switches, temperature sensors and switches from automatic samplers. Outputs include discrete outputs to motors, valves and alarms, and analog outputs to variable frequency drives and a modulating control valve. The MMI provides manual control of valves and pumps. The MMI also displays a schematic of the storm water systems current status as well as a schematic for all AQ IV settings (Tuning parameters) and alarms status if any problems are detected by the system an audible alarm will sound until acknowledged by an operator. Figure 2 provides an example of the control system display used to monitor the AQIV system.

Figure 2 - AQIV Control System Display

4.0 Summary

III. AWARDS JUSTIFICATION

- 1. Describe the baseline conditions which led to the development and implementation of your program/project. Is this program/project part of an overall plan or program for your community? If so, briefly describe how or where this program/project fits into your overall program. Is it part of a facility plan?**

There are several factors which led to the decision to construct the AQIV system. First, Ciba is committed to the community and the environment. Ciba has received various environmental awards for operations throughout the world, and is an active member company in the Chemical Manufacturers Association (CMA) Responsible Care Program®. The Newport Site is also the second facility in Delaware to obtain ISO 14001 Registration for the facility's environmental management program.

Maintaining high water quality of wet weather and dry weather flow to the Christina River has always been a priority for the Ciba Operations at the Newport Site. As stated previously, groundwater infiltration created a dry weather flow to the river. Due to the presence of zinc concentrations in the range of 1-5 mg/l, dry-weather flow from this outfall exhibited toxicity from outfall 001 at 100% effluent during acute biomonitoring assays performed as part of the CWA 304(l) requirements of our NPDES permit. Additionally, consistent with the Site's Environmental Management Principles, Ciba realized an opportunity existed to reduce total suspended solids (TSS) levels in stormwater discharged to the river, which are at a maximum during the first flush of precipitation runoff.

2.0 Biomonitoring Program

As part of the Site NPDES permit requirements, quarterly biomonitoring of outfall 001 was performed. Investigation of the source of biomonitoring toxicity was shown to be caused by groundwater infiltration. As a corrective measure, Ciba installed synthetic resin pipe liners throughout the Outfall 001 collection system to prevent infiltration. The liner system was completed in January, 1992, at a cost of approximately \$1 million. This corrective measure produced consistent compliance with the biomonitoring-provisions of the permit when in April, 1995 a series of acute screening toxicity tests failed to achieve the permit conditions.

Following this test result, Ciba installed an infiltration capture system to prevent the discharge of dry weather flow to the river. This was completed in May, 1995, and involved the pumping of about 5 gallons per minute of dry weather flow to the process sewer.

The NPDES permit required that in the event the survival rate of the species tested was less than 80%, then testing of more sensitive species (definitive acute toxicity) is mandated. If the survival rate of this test is less than 100%, then the Site was required to submit a Toxicity Reduction Evaluation (TRE) Plan. A definitive acute toxicity test for fathead minnows was conducted in June, 1995, and showed that the 48-hour LC_{50} was less than 100% in 100% whole stormwater. In accordance with the permit, this definitive testing result triggered the requirement for a TRE plan.

3.0 Toxicity Reduction Program (TRE)

The Newport Site submitted a TRE Plan addressing the current aquatic toxicity issues in 1995. The TRE Plan is structured from Tier I through VI. Pursuant to the Ciba Plan, Tiers I through III were performed and identified zinc as the toxic component of the discharge. The Tier IV Study (Source Evaluation and Identification, or SIE) identified groundwater infiltration as the source of zinc toxicity in from the 001 outfall.

During the Tier V evaluation, options were identified as potentially effective to reduce or eliminate the toxicity problem at the Site. The first was to continue collection and transfer to the publicly owned treatment works (POTW). The second was reduction or treatment at the source (or at some point prior to discharge); the third was beneficial reuse of the stormwater which would prevent the discharge to the river; and, the fourth was end-of-pipe treatment. All of these methods are capable of achieving the goal of reducing the aquatic toxicity of the water entering the river. However, the implementation, costs, operation, and maintenance of these methods differ greatly. Source reduction was determined to be technically impracticable and treatment was considered economically infeasible. As a result of the Tier V study (Toxicity Reduction Methods) the AQIV system was proposed as an integral part of the overall site modernization (refer to Section II).

The next phase, Tier VI of the TRE process has commenced. The results of this testing are presented in Section III, Question 3, and show no mortality. Ciba will perform quarterly monitoring until the end of 1999, at which time, if all results meet the requirement of the TRE

performed until permit renewal at the end of 2000, as allowed for in the current NPDES Permit. During the permit renewal process, if all the monitoring results are satisfactory, the biomonitoring requirement may be eliminated from the renewed Ciba NPDES Permit.

4.0 Total Suspended Solids (TSS)

Total Suspended Solids excursions occasionally occurred in the Outfall 001 discharge. These excursions became more frequent when automatic first flush samplers were installed in July, 1994 at all of the facility's outfalls. Ciba sought to reduce the discharge of TSS by instituting a number of control and housekeeping measures. As part of the Ciba Stormwater Program, BMP's are implemented and positive results have been observed since implementation.

This program has significantly reduced the amount of TSS discharged to the river. Additionally, the AQIV system captures the first flush of stormwater runoff, thereby eliminating the majority of the remaining TSS previously discharged to the river.

- 2. Explain the factors or circumstances which led to the decision to use your selected approach. Were alternative approaches considered? If so, what were they? Describe briefly the factors on which the alternatives were rejected.**

TRE Reduction Alternative Analysis

Four proposals were made for other alternative systems focusing on toxicity reduction, each described below:

1.0 Capture and Transfer to POTW

Under this scenario, Ciba would maintain the existing system which consisted of an end-of-pipe collection system draining approximately 7,500 feet of underground stormwater sewer lines of various sizes. At the time, these older concrete pipes were in poor condition and had developed many cracks and leaks. Ciba was pumping the dry weather flow to the process sewer, which was permitted by New Castle County, the agency responsible for the process sewer system regulation. At the time if this decision, the permit allowance for discharge of the collected infiltrate was due to expire upon renewal of the existing permit.

2.0 Source Reduction

A second option that was reviewed was "Source Reduction" which typically involves procedures and methods to reduce or eliminate toxic input to the sewer system. A reduction method could be introduced at any point in the sewer system. For this method to work first a specific point or branch of the sewer system would have to be identified as the source of toxicity. At this point there are three options: 1) preventing the toxic source from entering the sewer system; 2) removing or eliminating the source or; 3) treating the stormwater in that branch of the storm sewer.

3.0 End of Pipe Treatment

The third option considered was "End of Pipe Treatment", for which the potential list of applicable treatment technologies included: activated carbon adsorption; sand filtration; reverse osmosis; resin adsorption; chemical oxidation; chemical coagulation and sedimentation.

4.0 Capture and Reuse

The fourth option was capture and reuse, and would require collection of stormwater from the site to eliminate any potential toxic discharge to the river. Once collected, the water could be reused at the site, reducing the consumption of purchased water.

5.0 Alternative Analysis

Options 1 to 3 were rejected for several reasons. The first option, to maintain the current system would not be cost effective due to the deteriorated condition of the existing collection (particularly on the eastern portion of the site), as well as due to phase-out of the POTW discharge option. The second option "Source Reduction" was rejected for the same piping deterioration as stated above. With the toxicity source being contaminated ground water infiltration there would be too high a cost associated with maintaining the system long-term. The third option "End of Pipe Treatment" would only be considered if all other options were impractical due to economic constraints.

Ciba chose to implement a capture and reuse system based on the following combination of factors:

- The first flush of stormwater runoff is collected, reducing pollutant loading to the Christina River
- The quantity of groundwater infiltration could be handled by the AQIV system, eliminating the need to pump the ground water to the process sewer or to the river
- The stormwater and dry weather flow will provide a beneficial use for the site as opposed to direct discharge to the Christina River
- The system provides on-site containment of contaminated runoff outside the production areas in the unlikely event of a fire or a chemical spill
- the system allows for better manpower use compared with the existing system. Savings will be seen in the maintenance area for upkeep, Environmental for sampling and reporting requirements
- Contaminated water from either a fire or chemical spill can be isolated in sumps or tanks and disposed of in a proper manner and not contaminate the Christina River.

3. Has your program/project achieved its goals or objectives? What environmental benefits have been realized as a result of your program/project? Were there any unexpected or side benefits or problems from the program/project?

The primary objectives of the AQIV system are:

- Eliminate dry weather flow which is the source of the toxicity that has caused repeated biomonitoring failures and led to the triggering of the Toxicity Reduction Evaluation (TRE).
- Capture the first flush of stormwater runoff from the Site
- Beneficial reuse of the captured infiltrate and stormwater as a water resource.
- Provide containment for spills and fire water used in an emergency that may occur outside of production areas.

The AQIV system has been operational since September 1998, fulfilling the Tier V component on the TRE process. As a result of the startup of the system, all precipitation runoff for the entire 4th Quarter 1998 was collected and re-used on-site. In addition, dry-weather flow was minimized;

collection sump), dry-weather flow was not eliminated until late September 1998. Corrective measures have been effectively implemented to consistently ensure that dry-weather flow at the site is virtually eliminated to the Christina River from Outfall 001.

The first flush of stormwater runoff is now collected and reused on-site as utility water. The system overflows to the Christina River through two (2) NPDES-permitted outfalls (001 and 009) only when either the system collection capacity is reached, the pumping system cannot maintain the pumping rate of the runoff generated, or the runoff has a high conductivity due to the use of road salts in the winter months. The latter measure is necessary for corrosion protection of utilities at the site.

During the first four months of 1999, the AQIV system captured 11 entire rain events out of a total of 23. The biomonitoring testing of the February and April 1999 events resulted in a 100% survival rate in 100% effluent for both the *Pimephales promelas* and *Ceriodaphnia dubia* tests. In order to demonstrate the efficacy of the Newport TRE Program, results of the testing performed to date in 1999 are presented below.

Table 1 - 1999 Biomonitoring Results % Mortality at 24-hour End-Point

Sample Date	<i>Ceriodaphnia dubia</i>	<i>Pimephales promelas</i>
2/18/99	0	0
2/28/99	0	0
4/10/99	0	0

The AQIV system has also proven its effectiveness in both spill and fire water containment. There have been three small spills from production areas in the past eight months, and all three were caught by the AQIV system. In addition, during extensive fire water testing the AQIV system was able to contain 100% of all runoff which was later reused on site.

- 4. What were the costs for developing and implementing the program/project? How was the program/project financed? Were any Federal or State funds used in developing and implementing the program/project? If so, identify the funding source and the amount contributed by each source.**

The AQIV Project was approved in 1996, and construction was completed in 1998. Engineering, installation and supervision was provided by Fluor Daniel Corporation, and the AQIV Project was completed under budget and on schedule. Funding for the entire project was provided by Ciba Specialty Chemicals. The AQIV Project was part of an overall ~\$200 million modernization project at Ciba's Newport Site. Table 1 provides details as to cost for the AQIV project.

Table 1 - Cost Summary for AQIV Project

Cost Category	Approximate Cost
Civil	2,000,000
Structural	250,000
Pumps	160,000
Tanks	350,000
Piping	1,000,000
Electrical/Instrumentation	780,000
Engineering, External	600,000
Engineering, Ciba	150,000
Construction Management	550,000
Misc. Ciba Costs	100,000

Total Capital Costs	5,940,000
Expense Costs	
Excavation	120,000
Demolition	40,000
Disposal	700,000
Total Expense Costs	860,000
Escalation	100,000
Total Investment Including Escalation	6,900,000

5. Has the program/project been cost effective in terms of the benefits achieved? If so, provide documentation supporting or demonstrating the cost effectiveness.

Annual maintenance cost savings are approximately \$85,000 dollars per year, as compared to the previous capture system. The cost savings realized by reusing captured runoff is currently \$30,000 per year, which will increase when the new Phenix QA Manufacturing facility is commissioned in 2000. The AQIV system has reduced the number of outfalls at the Newport Site to two. Analytical costs have been drastically reduced because of the reduction in outfalls discharging to the river.

Perhaps the most impressive benefit achieved by AQ IV can be seen in our biomonitoring results. These results represent the first ever consecutive quarterly biomonitoring events with no mortality, demonstrating once again the effectiveness of the AQIV system.



MAR 29 1999

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REPORT PLANT
BLDG. LOCATION MAP &
FEDERALMAN WALKWAYS
OFFICIAL SITE PLAN
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Ciba

Ciba Specialty Chemicals Completes 8-Year, \$180 Million Modernization Program In Newport, Delaware



**New State-Of-The Art, World-Class DPP And QA Plants Provide Customers Quality
High Performance Pigments And Improve Company's Global market position**

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Dorsett & Jackson, Inc.	10
DuPont Nylon Intermediates and Specialties	11
Fluor Daniel	17
Hermann Services, Inc.	19
International Business Publishers	11
Philadelphia Mixers	10
Plumbers and Pipefitters Local 74	18
Sordani Skanska Construction Co.	2
Tetra Tech, Inc.	10
The Chidley & Peto Company	
Inside back cover	
Thermal Heat Transfer Fluids	17
Van Waters & Rogers Inc.	19

Table Of Contents



Ciba



3 Massive Newport Modernization Is 'Clear Evidence Of Ciba Specialty Chemicals' Continuing Commitment To The Pigment Business'

5 Ciba Specialty Chemicals' Newport Projects Completed On Time And Within Budget, Demonstrating Ability 'To Deliver On Promises'

8 New Production Facilities Dedicated To manufacturing Excellence In Synthesis Of Quinacridone And DPP Pigments

12 Highly-Trained, Multi-Skilled Workforce Sets New Standards For Operations In New QA Facility



14 Enhanced Process Understanding Assures Quality Consistency In Quinacridone Production At Newport

15 Excellence Of New QA Unit Assured By Use Of Only Components Representing The Best Value

16 To Achieve Its Goal, Purchasing Buys Highest Quality Goods, Services From Hundreds Of Suppliers Worldwide

20 Newport's New Facilities Show Ciba Specialty Chemicals' Commitment To Provide The High Quality, Consistent Products Customers Demand



23 Newport Modernization Featured Environmentally Friendly Facilities That Protect Employees And The Community

24 A Brief History Of Ciba Specialty Chemicals



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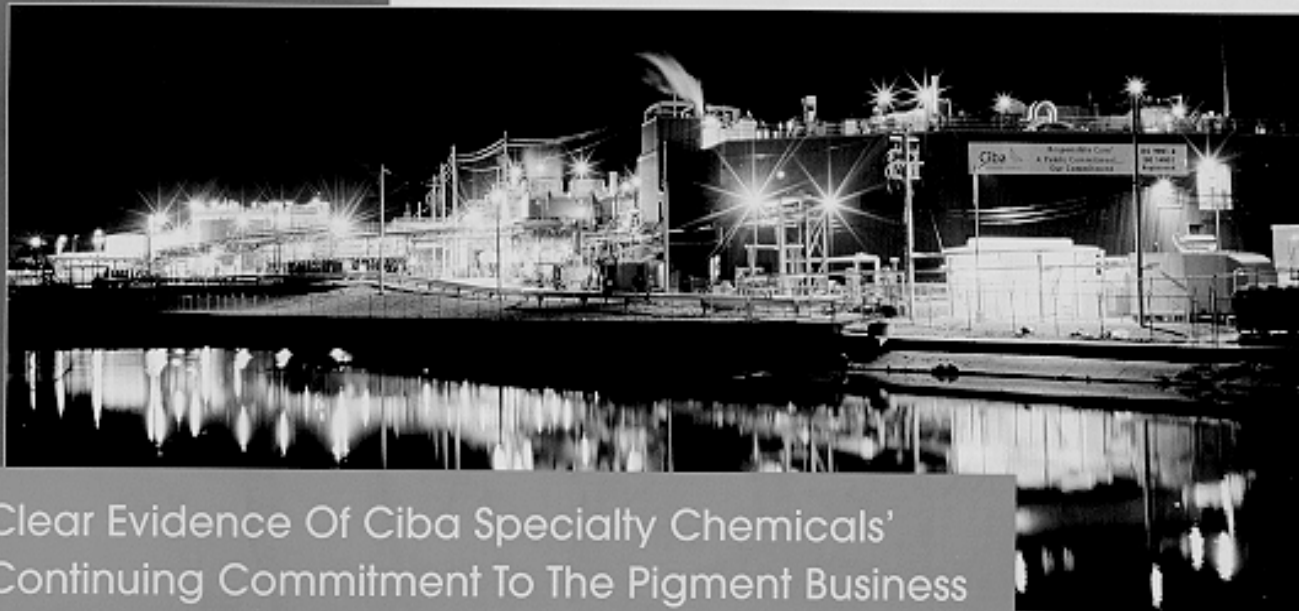
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Massive Newport Modernization



Clear Evidence Of Ciba Specialty Chemicals' Continuing Commitment To The Pigment Business

The Colors Division of Ciba Specialty Chemicals completed its new state-of-the-art Quinacridone (QA) Plant in May 2000, ending a massive 8-year, \$180 million modernization program at its Newport, Delaware facility.

In addition to the QA plant, the modernization program included a new world-class production facility for DPP (Diketo Pyrrolo Pyrrol) pigments in April 1997 and several important infrastructure projects that guarantee environmental performance matching or exceeding all regulatory requirements.

He added:

"The Newport modernization projects give Ciba Specialty Chemicals unique new opportunities to serve our

customers with quality, high performance products and with maximum flexibility of service. We also will continue to maintain and grow our market leadership position globally by becoming more effective and competitive in the pigments market."

According to King, the modernization efforts not only will better serve Ciba Specialty Chemicals customers, they also will serve the Newport community by significantly reducing environmental impact. He added that the facility and its employees are committed to being good environmental stewards and good neighbors.

In 1997 and 1999, the State of Delaware recognized the Newport modernization program as the Environmental Project of the Year. In 1999, the site earned the Stormwater Excellence Award from the U.S. Environmental Protection Agency (EPA).

"We are proud of our accomplishments in environment, health, and safety, and will strive to continuously improve in these areas," said King. >

"The modernization efforts that began in 1993 are clear evidence of Ciba Specialty Chemicals' continuing commitment to the pigments business, one of the targeted high growth businesses for the company," said Phil King, Vice President, Business Operations.





- The massive 8-year, 180 million modernization program provides Ciba Specialty Chemicals with new and unique opportunities to serve their customers with quality, high performance pigments and with maximum flexibility of service.

"I think I speak for the whole Newport team when I say that we are truly excited about the opportunities that lie ahead. We will do everything we can to ensure the success of our facility to better serve our customers," promised King.

King recalled that Ciba Specialty Chemicals has been investing almost continuously in the 30-acre Newport site that it bought from DuPont in 1984. DuPont had been producing QA pigments there since the 1950s. In 1987, Ciba Specialty Chemicals added new finishing capacity to better service customers.

In 1988, the Coatings Technical Center was enlarged and upgraded to meet continuously growing customer needs. In 1992, the Pigments Division consolidated all operations in Newport, adding technical service labs and offices, followed by a new research and development laboratory.

The enlarged and upgraded Coatings Technical Center.

"By the early 1990s," said King, "it was obvious that we needed expanded manufacturing capacity. With the completion of the modernization projects over the last eight years, we have effectively doubled our production capacity with a reduction of air emissions by as much as 95% to protect the environment."

The high level of inhouse experience in Quinacridone chemistry provides product excellence for Ciba Specialty Chemicals' customers.



The completion of the new state-of-the-art Quinacridone Plant finalized the 8-year modernization program.



Ciba Specialty Chemicals' Newport Projects

Completed On Time And Within Budget,
Demonstrating Ability 'To Deliver On Promises'

"Our modernization effort at the Newport site, completed on time and within budget, demonstrated with absolute clarity that Ciba Specialty Chemicals is 'The Leader of the Industry', able to deliver on promises and exceed expectations.



1

"And this success has enabled the company to enter the new millennium ready to take advantage of marketplace opportunities with some of the world's finest facilities."

That's how Eric Gubler, Executive Director, Modernization, characterized the success of the programs he directed at Newport.



He added:

"With the technical changes accomplished at the Newport site since 1993 three major targets have been fulfilled:

1 Several newly built infrastructure projects guarantee that the environmental performance of the Newport site constantly matches or exceeds all regulatory limits.

2 In April 1997, we opened a new world-class production facility for DPP (Diketo Pyrrolo Pyrrol) pigments, the only U.S. manufacturing source for these unique pigments that were created and introduced worldwide by Ciba Specialty Chemicals in the 1980s >

2



5

3 The mature QA (Quinacridone Synthesis) plant at Newport has been replaced with a new state-of-the-art, computer-controlled manufacturing unit that was started up in May 2000. This plant gives Ciba Specialty Chemicals the capability to maintain its competitive advantage."

Gubler noted that the modernization effort included a series of necessary environmental projects:

3



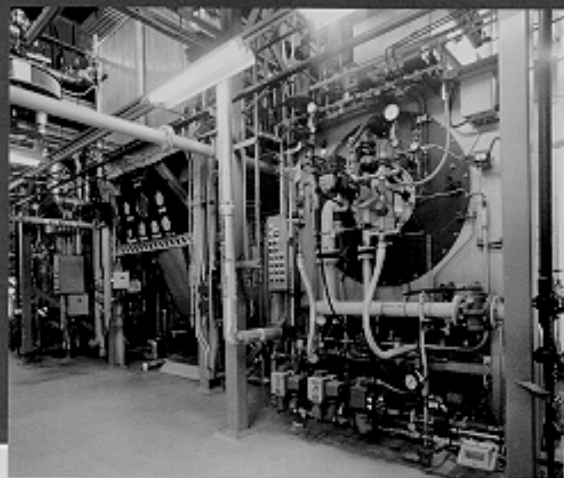
- Addition of a new electrical substation and three low-noise, high-efficiency air compressors started up at the end of 1995, reliably meeting the site's expanded power requirements.

- Connection of the plant's process water lines directly into the county force main, a more direct route to the county treatment plant, required construction of a 300-foot steel bridge across the Christina River bearing double-walled pipelines with leak detection systems. This system, placed in use in May 1996, prevents odor complaints and occupational exposure for county workers from process related wastewater.





- Utilization of a new process water neutralization system that collects process water via above-ground double-walled piping and neutralizes it in two 500,000-gallon tanks sequentially began operations in April 1997.



- Installation of two new boilers, generating 200,000 pounds of steam per hour, with significantly reduced NO_x, SO₂, particulate and carbon monoxide emissions, was completed in September 1997.

"The innovative, high-performance DPP and QA facilities could only be run with the completion of all these additional infrastructure investments to support the new plants," said Gubler. ■

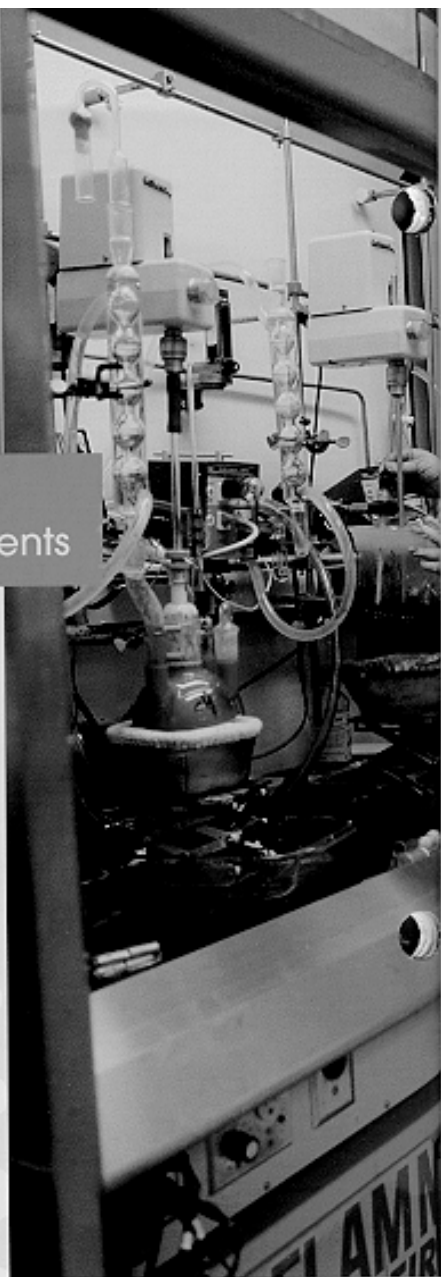
- Development of a spill, fire, and storm water management system with two 30,000-gallon collecting sumps and an 850,000-gallon storage tank, avoiding discharge to the river and enabling reuse of the water in the plant's cooling system, has put into operation in August 1998.



New Production Facilities

Dedicated To Manufacturing Excellence
In Synthesis Of Quinacridone And DPP Pigments

"With the completion of the new QA Synthesis plant, our Newport Site now has modern, state-of-the-art, computer-controlled production facilities dedicated to manufacturing excellence in the synthesis of Quinacridone and DPP High Performance Pigments," said Colin Mackay, Vice President, Manufacturing.

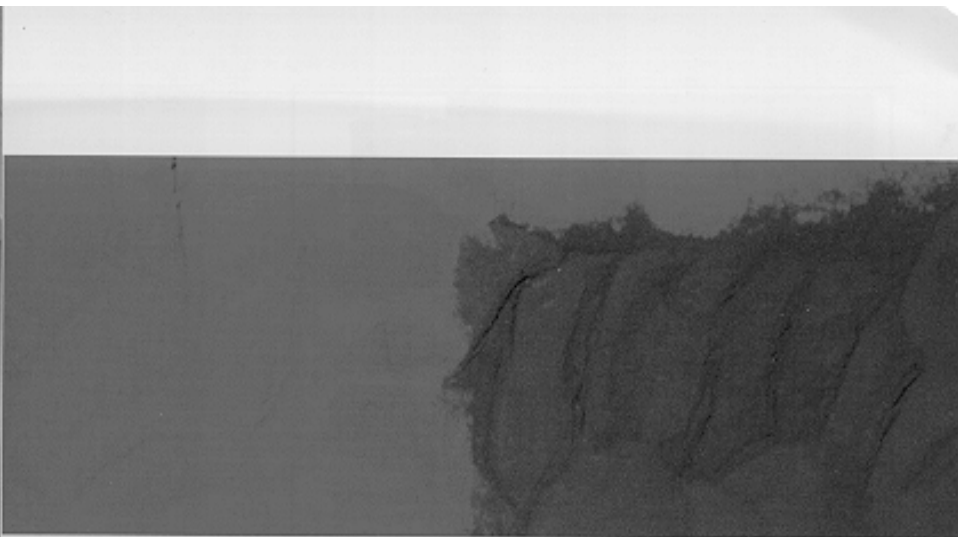


• • • The utilities and raw material pipe bridge provides a better utilization of raw materials.

He added

"Our new DPP production facility was successfully started in 1997 with the first batch on standard, and we have continued to provide our customers with top quality IRGAZIN DPP Red BO ever since.

"We also had an equally high level of confidence that our new QA synthesis plant, based on a combination of our high level of in-house experience in Quinacridone chemistry, engineering expertise, and thorough preparation,



● The new research and development laboratory is equipped with state-of-the-art equipment to increase accuracy and consistency of analysis.



● Maintenance technicians have to deal with the most complex matters relating to computerized information technology.

would provide product excellence for our customers.

"In fact, our modern computer-controlled plant is providing a high level of quality consistency and better utilization of raw materials."

Mackay noted that important operational pluses at the new QA facility are reduced manual handling, improved worker safety, and dramatically reduced environmental impact through improved solvent regeneration and recovery.

"Quinacridone from the new synthesis plant is processed through our existing Finishing plant to our established Finished product standards."

"As a result," Mackay said, "we look forward to continuing to support our customers with quality Quinacridone products."

On a personal note, Mackay added:

"Newport is a terrific place to work, not only because of our new world class plants, but also because we have a great group of committed people dedicated to manufacturing excellence." ■



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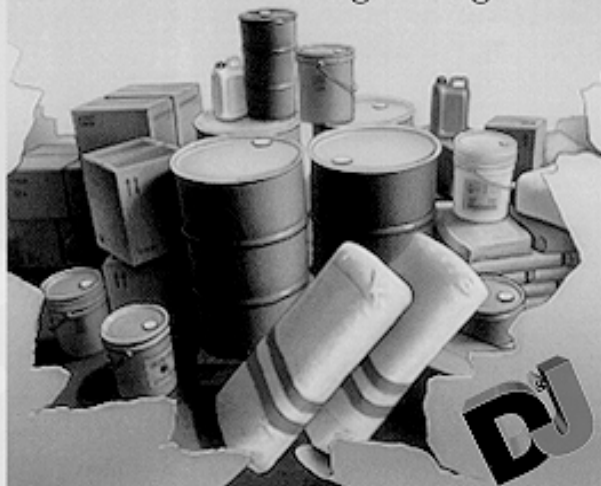
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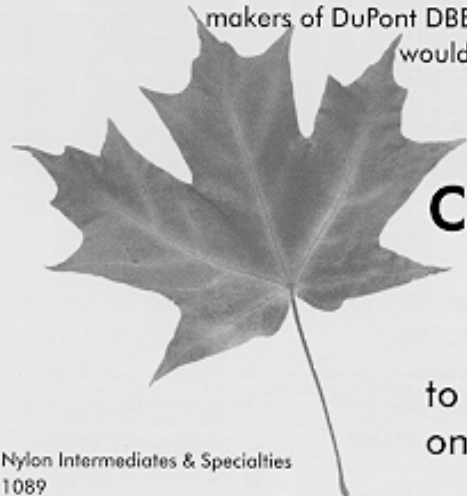
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*Congratulates
Ciba Specialty Chemicals
with their new facility
in Newport, Delaware.*

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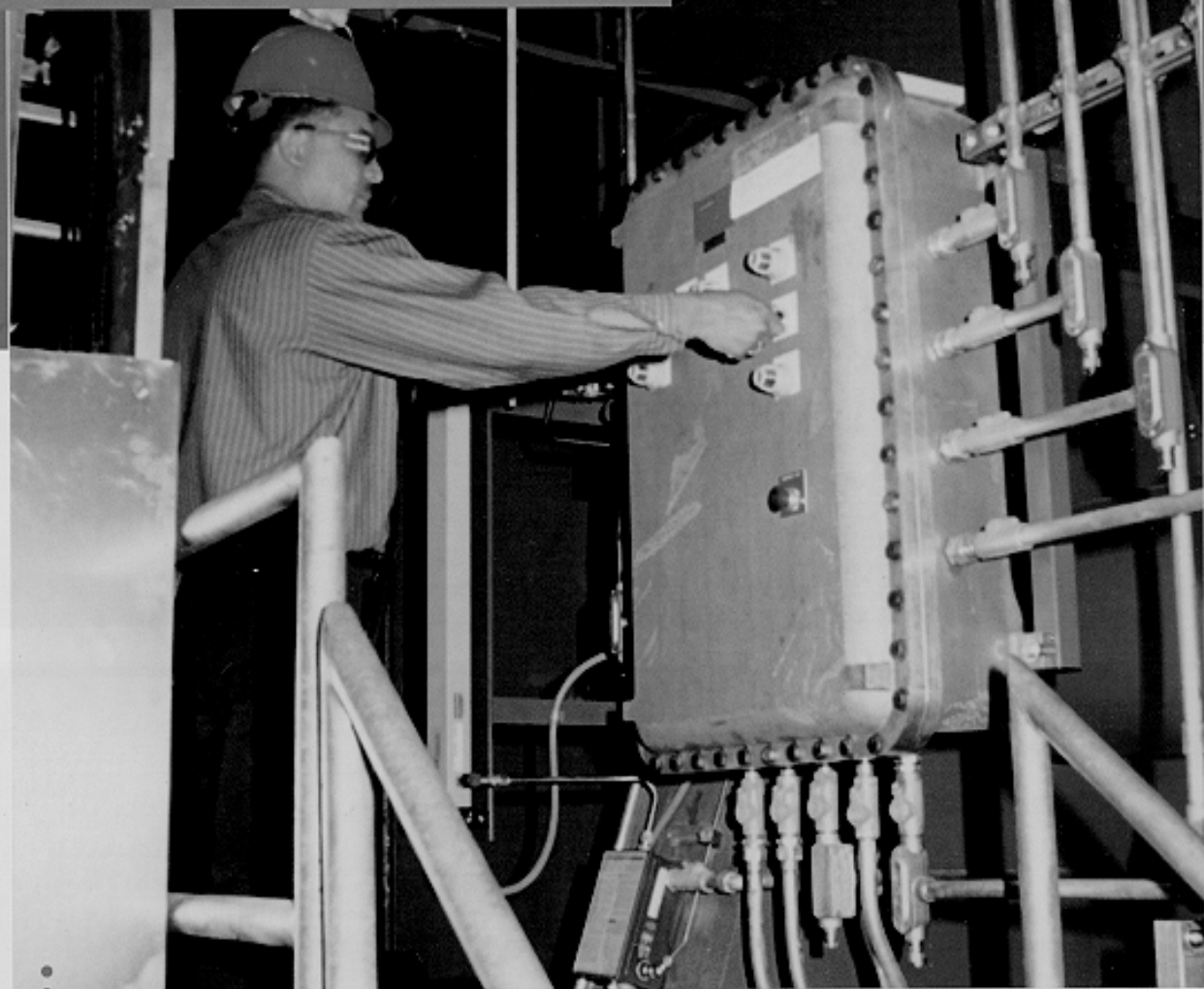
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Highly-Trained, Multi-Skilled Workforce

Sets New Standards For Operations
In New QA Facility



- Due to the addition of new state-of-the-art equipment, tailor-made operator training program was developed by Ciba Specialty Chemicals and a local college.

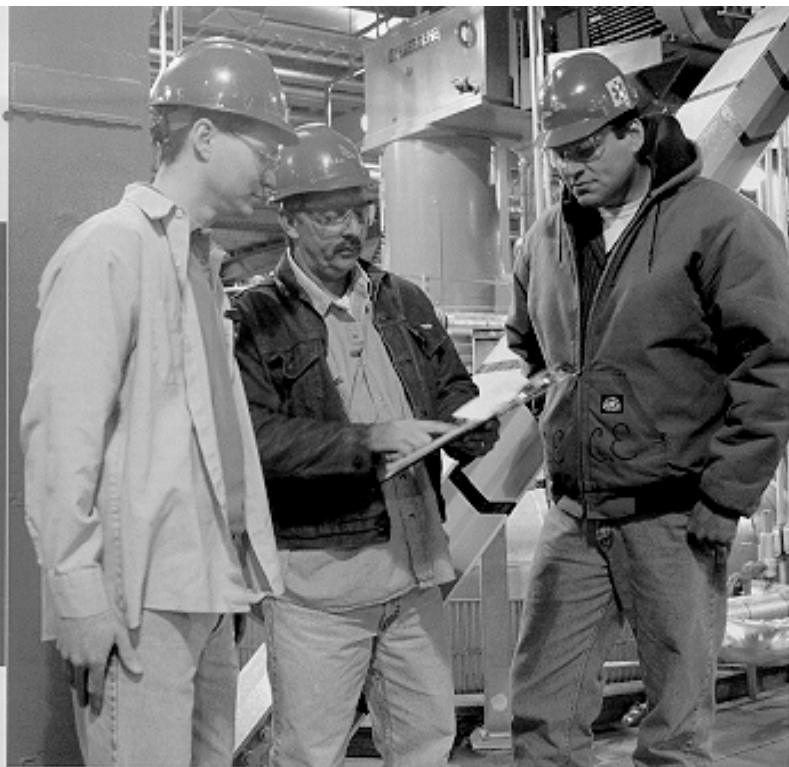


“With the new facility came a new standard in operator training and skill level,” said Mike McFarlane, QA Production Manager.

He explained:

“A prerequisite for working in the new plant is a technical qualification called QCO (Qualified Chemical Operator). This course, developed by Ciba and a local college, is tailor-made for the needs of an automated process plant. Each of the plant technicians working in the new QA facility took the classes on their own time with company sponsorship, and graduated after 18 months of dedicated study.”

Thorough training in understanding the production process is vital to the future success of Ciba Specialty Chemicals.



"Chemist-provided classroom training and interactive computer-assisted training were used, providing the production teams with a strong understanding of the process."

Vendors participated in the program by supplying training packages for their equipment, covering everything from specific instruments to major pieces of plant manufacturing equipment.

"Learning how all the equipment works first-hand from the suppliers will reap huge rewards for the future because the operations personnel now have a solid understanding of how the process and the plant interact," said McFarlane.

To ensure that no gaps existed in the know-how needed for running the new plant, technical support was provided round-the-clock during the start-up phase. Automation personnel worked on shift, transferring knowledge of computer controls to the operations team, explained McFarlane.



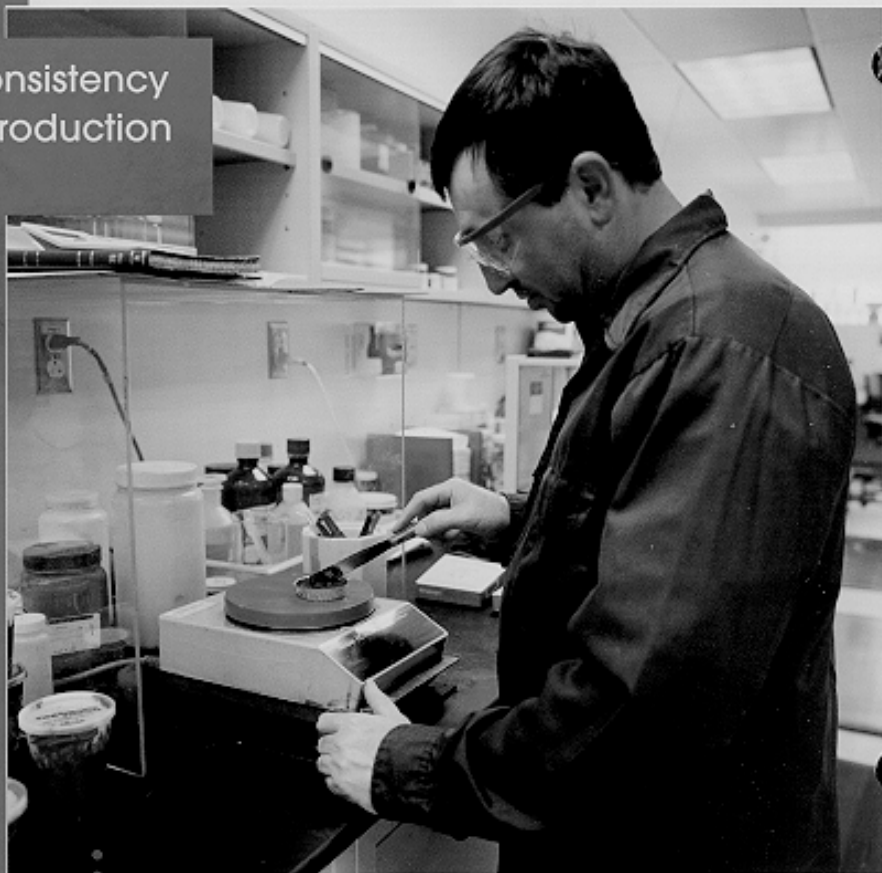
A training team was established to identify and implement training required for the new facility. All areas were considered, including team building, safety training, process, and plant maintenance. With an automated plant, emphasis shifts from skills in manual tasks to analytical, technical, and troubleshooting skills.

"The result is that we have a highly-trained, multi-skilled workforce ready to consistently provide quality product from the new facility," said McFarlane. ■

A progressive training program was set up to transfer knowledge of computer controls to the operation team.

Enhanced Process Understanding

Assures Quality Consistency
In Quinacridone Production
At Newport



● To ensure the highest quality product, samples are analyzed in the laboratory.

"The new Quinacridone plant was the major project for the Process Development team for several years," said Rudy Merstetter, Head of Process Development.



"Our goal was to gain enhanced process understanding in order to assure quality consistency. Finally, our years of intensive work in labs, kilo-lab, and pilot plant came to an end with the start-up of the new production facility," he said.

Merstetter added:

"Our international team of chemists and engineers worked together on both sides of the Atlantic to assure total understanding of the QA synthesis process so that we would be capable of handling the environmental and quality challenges of the coming years."

"This process also shows our company's commitment to utilize highly automated, state-of-the-art process control

equipment, allowing us to utilize knowledge gained in recent years in order to produce within the narrow tolerances we need to manufacture the highest quality product."

"As a result," added Merstetter, "Our understanding of the quality controlling parameters has reached a new dimension, due to our intensive experimentation."

For instance, he noted, everybody who needs the results has them available only minutes after sampling on his PC. Barcodes are used to eliminate transmission errors, and graphical and statistical process control information about the performance of the process is available by just pressing a button. ■

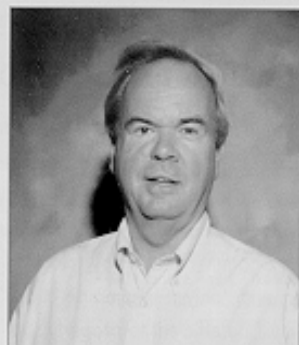
Excellence Of New QA Unit

Assured By Use Of Only Components Representing The Best Value



● Mixers and pumps that have proven themselves at the DPP plant were selected for the new QA facility as well.

"To consistently produce a quality pigment, we built quality into the new QA facility," said George Batchner, Senior QA Project Manager.



He explained:

"Doing this meant not using the least costly components, but, instead, using those offering the best value. Best value means quality components with proven reliability at a fair price."

For instance, Batchner noted that "Our sister DPP plant, built in 1997 and occupying the other part of the new building, gave us much insight into which equipment, instrumentation, and automation performed best. This gave us a great advantage in selecting the best components for the new QA Plant."

The vessels, mixers, and pumps that proved themselves at the DPP plant were selected to be part of the new QA facility.

The automation hardware, which also had proven itself, was selected for the QA plant, as well. "In fact, we were so familiar with the system and its capabilities that we developed the

software ourselves, which works as expected for the new facility," added Batchner.

Batchner said the new QA plant contains 335 pieces of equipment, 16.3 miles of pipe, and 85 miles of wiring. Additionally, there are 510 analog signals, 2,800 digital in/out points, and over 10,000 wire connections.

"We built quality into the construction and installation of the components, as well," he noted. An extensive inspection and checkout process was conducted to make sure all piping and wiring was installed properly and tested. People who would be the future users (production staff and operators) participated in this activity.

"Now, the people operating this plant know it from the inside out. **QUALITY** is already part of the new QA Plant," he added. ■

To Achieve Its Goal,

Purchasing Buys Highest Quality Goods, Services From Hundreds Of Suppliers Worldwide



"The primary goal of the Newport purchasing department is to constantly seek to purchase goods and services that represent the highest quality for the company," said Dan Lyons, Director of Purchasing.



To achieve this goal, purchasing must be successful in working with hundreds of suppliers worldwide, sourcing 300 different chemicals for the Colors Division.

"We also often draw on Ciba Specialty Chemicals' international network of resources to obtain the best value," said Lyons.

- Testing of incoming raw materials at the
- Analytical lab.



He added:

"In the process of buying these critical chemicals, we review our product specifications and those of manufacturers to find proper matches."

"As the QA facility was under construction, we often brought together the

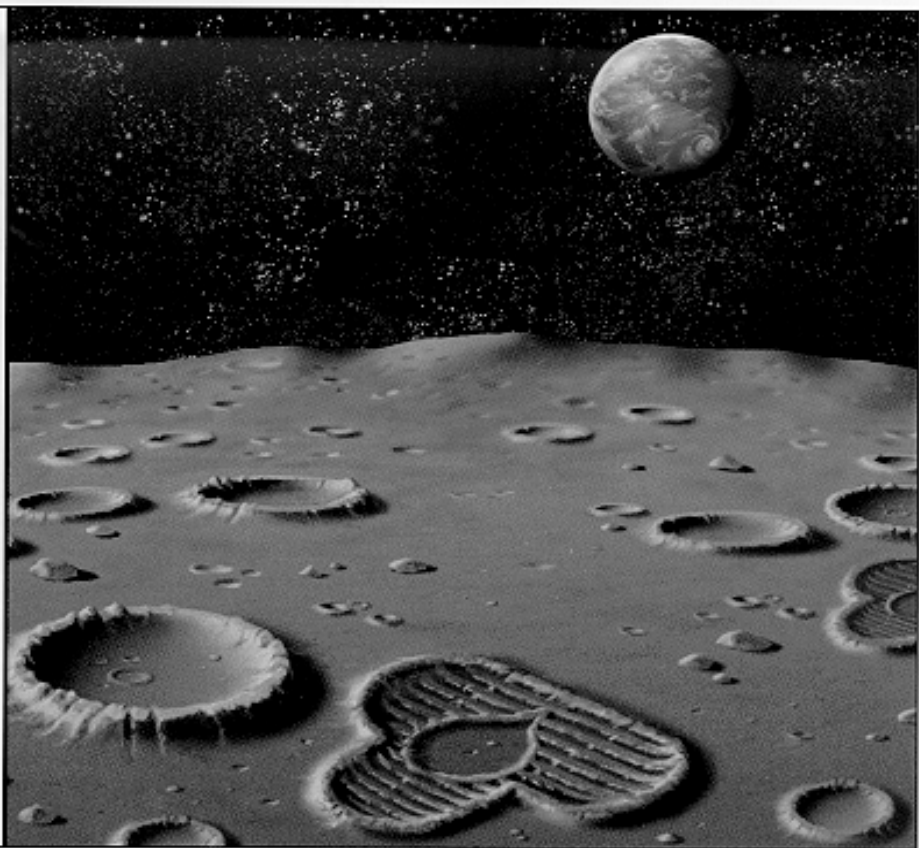
Ciba Specialty Chemicals Research and Development personnel and the supplier's technical department to resolve any differences in requirements. This assured suitable and consistent quality for all our incoming materials entering the QA process."

Lyons also said, "During the modernization process, we have seen improvements in packaging and logistics of delivery for the new QA plant. Since the Newport Site is certified to ISO 9001 and 14001, purchasing documents to these standards. In doing so, we have found ways to improve the purchasing processes and coordination with production.

"In the ever-changing world of purchasing, changes in the chemical industry require that colleagues in purchasing stay up-to-date in order to meet customer requirements. In expanding our use of E-commerce, we now place orders with 'only a few mouse clicks.' We must be efficient to properly support the success of our customers." ■

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FOR CIBA SPECIALTY
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*Congratulations to
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on the successful completion
of the modernization program
at its Newport, Delaware
facility.*




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Newport's New Facilities

Show Ciba Specialty Chemicals' Commitment To Provide The High Quality, Consistent Products Customers Demand



- Experienced chemists serve as a critical link in the Ciba Specialty Chemicals value chain of products and services.

"Our investment in the Newport facility is a major commitment to our large customer base in NAFTA and other parts of the world, giving us required capacity to provide the high quality, consistent products which our customers demand," said William Baker, Vice President, Sales, Paint Business.



He added:

"We also today are in a position to be in the business of continuously developing new future pigments that perform even more effectively for our business 'partners'."

As the new DPP and QA production facilities were developed at Newport, Baker said, "We involved many of our largest customers in joint meetings, an unprecedented joint effort to ensure a smooth transition as they began receiving DPPs from Newport, instead of from our overseas factories, and as they began receiving QAs from the new facility."

He stated:

"We are excited about this major Ciba Specialty Chemicals commitment to our customers and their special needs, to environmental stewardship as a good citizen, and to product innovation in the future."

Product consistency is vital to automotive coatings. Customers buy pigments from Ciba Specialty Chemicals and disperse them into polymer resins as they make automotive paints. "It's vital that there be no variations in color and that each color be durable," he said.

Three groups report to the sales vice president: The technical service laboratory at Newport, the industrial paint group with eight sales representatives and five district managers in the U.S. and Canada, and the automotive group.

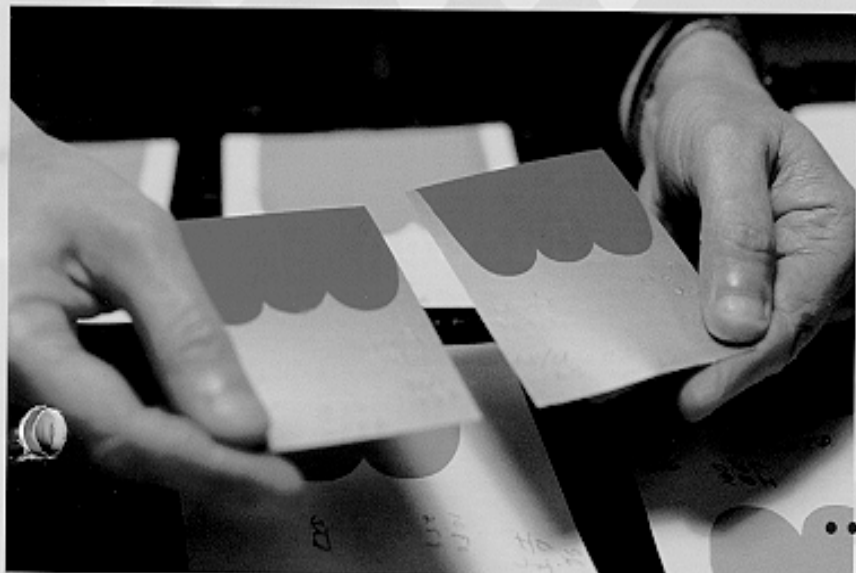
For the QA line, the largest usage, in fact, is in automotive coatings because of the pigments' durability and consistency. However, use in other applications is growing at a rapid pace.

Ciba Specialty Chemicals Quinacridone Pigments are used in the following applications:

- 1. Automotive paint**
- 2. Industrial, trade sales and powder coatings**
- 3. Consumer and engineering plastics and fibers**
- 4. Liquid, oil and specialty printing inks**

QAs provide a spectrum of consistent, unique color potential from violet through blue-tinged reds, while DPPs, using a different chemistry, offer brilliant midshade reds.

The automotive industry accounts for the largest portion of Ciba Specialty Chemicals sales to paint customers, including major auto coatings suppliers, such as DuPont, PPG, and BASF.



"Ciba Specialty Chemicals is the industry leader in pigments for paint, plastics and inks," added Baker. "We have earned that distinction by consistently providing superior products and services to our customers. Our Newport investment is actually an investment in the future of our customers. We are here to meet their needs by helping to solve their problems and by providing them value."

Ciba Specialty Chemicals is committed to quality at every level of the production process. Each unit has active assurance programs in place and in use every day.



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Newport Modernization

Featured Environmentally Friendly Facilities That Protect Employees And The Community

Protection of employees and the environment has always been a part of the core values of Ciba Specialty Chemicals, and the modernization of the Newport site is a clear example of this commitment, according to Matt Watson, Director of Environment, Health, and Safety.



To eliminate accidents, employees wear protective clothing and are trained in following the proper safety and environmental protection procedures.

"With completion of the new QA plant, the Newport site not only has excellent manufacturing capabilities, but also environmentally friendly facilities that are safe for both employees and the surrounding community," he said.

Watson noted that the Newport site has attained certification for its environmental management system under ISO 14001, and actively manages all aspects of its environmental compliance through this system.

"Because the safety systems at this site have been specifically developed to provide the utmost protection to employees, we believe that we qualify for membership in the Voluntary Protection Program (VPP) of the U.S. Occupational

Safety & Health Administration (OSHA). That's why we have submitted an application to OSHA and are awaiting inspection to confirm our belief," said Watson.

Ciba Specialty Chemicals is also a member of the Chemical Manufacturers Association (CMA). One of CMA's primary programs is called "Responsible Care." The program's goals are for member companies to attain a high level of control regarding environmental, health, safety, and community issues. Ciba Specialty Chemicals Newport is an active participant in this effort, and subscribes totally to the "Responsible Care" codes of conduct, noted Watson. >

The Newport modernization plan took into account all aspects of environmental protection, employee health and safety, and community interests. Infrastructure improvements, including air pollution controls, process wastewater systems, steam-producing systems, and stormwater runoff control, were all successfully implemented.



Specific achievements included:

- Volatile chemical emissions were reduced by 90% by installation of an on-site process off gas incinerator, reducing emissions to the environment and potential impact to the surrounding community.
- Methanol emissions to the process sewer were reduced by over 95%.
- Emissions to the air were reduced by over 40%. ■

A Brief History Of Ciba Specialty Chemicals

J.R. Geigy AG, the oldest chemicals company in Basel, Switzerland, began trading in chemicals and dyes.

Ciba and pharmaceuticals company Sandoz announced plans to merge into Novartis, a global life sciences group. It also was announced that Ciba's Specialty Chemicals divisions – additives, consumer care, pigments, performance polymers, and textile dyes – were to be spun-off as a separate company.

Allied Colloids plc, a leading global water treatments company, became part of the Ciba group known as the new Water Treatments Division.

Ciba Specialty Chemicals' Water Treatments business was integrated on March 1 into the Additives Division.

1758

1971

1996

1997

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1998

1999

Today

Geigy merged with Ciba, also a Basel-based chemicals company formed in 1884, to form Ciba-Geigy Ltd. Generally referred to as Ciba, the company was dedicated to satisfying needs in healthcare, agriculture, and industry.

These divisions were listed on March 13 on the Swiss stock exchange as an independent new enterprise – Ciba Specialty Chemicals.

Ciba Specialty Chemicals announced the creation of the Colors Division combining its Pigments and Textile Dyes divisions and creating the first specialty chemicals business focusing solely on the colors industry.

Ciba Specialty Chemicals generates sales in 117 countries, surpassing \$7 billion. The company offers the world's most innovative and broadest range of color solutions to customers in the area of inks, paints, plastics, textiles, and fibers. ■



*Congratulations
and continued success
to Ciba Specialty Chemicals.*

We are pleased to be part of your team.

Thank you!

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